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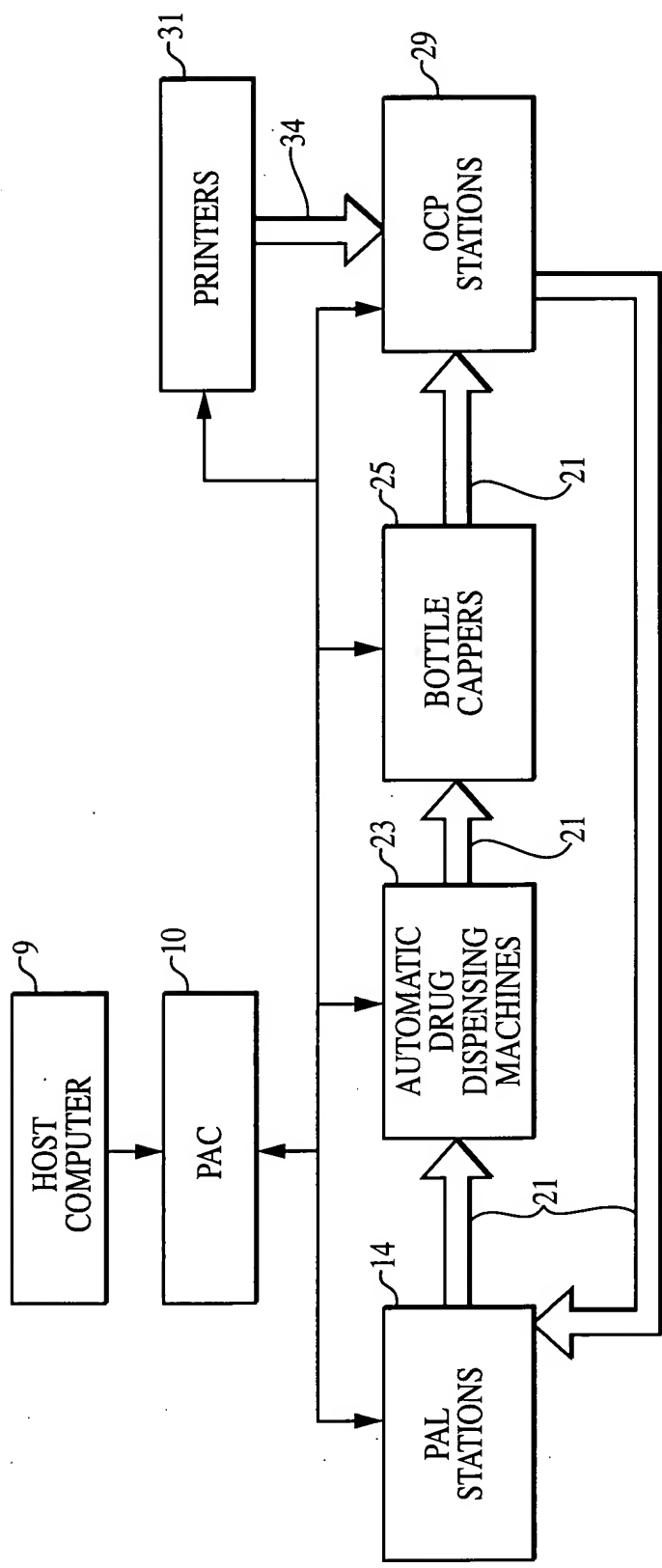


FIG. 1A

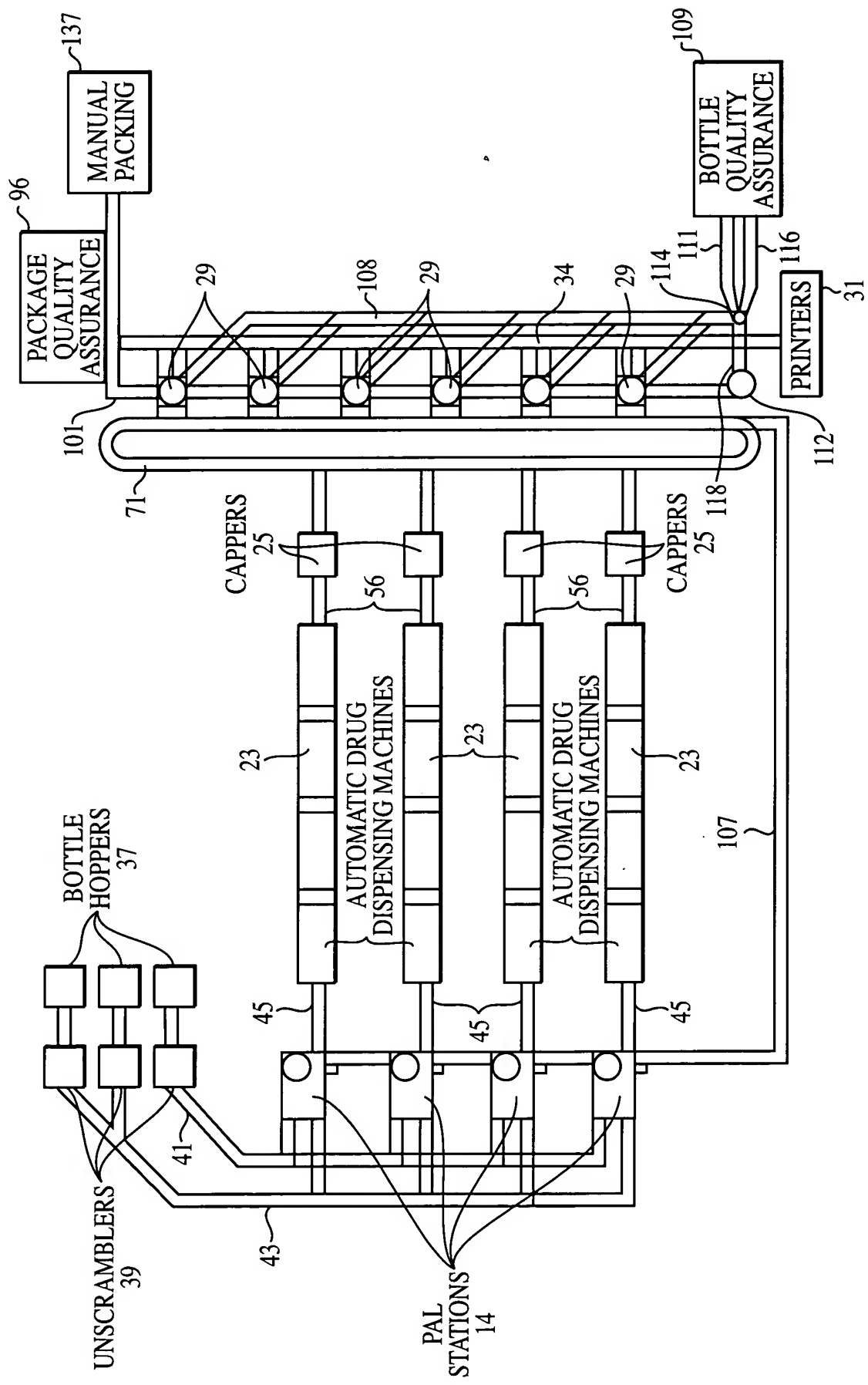


FIG. 1B

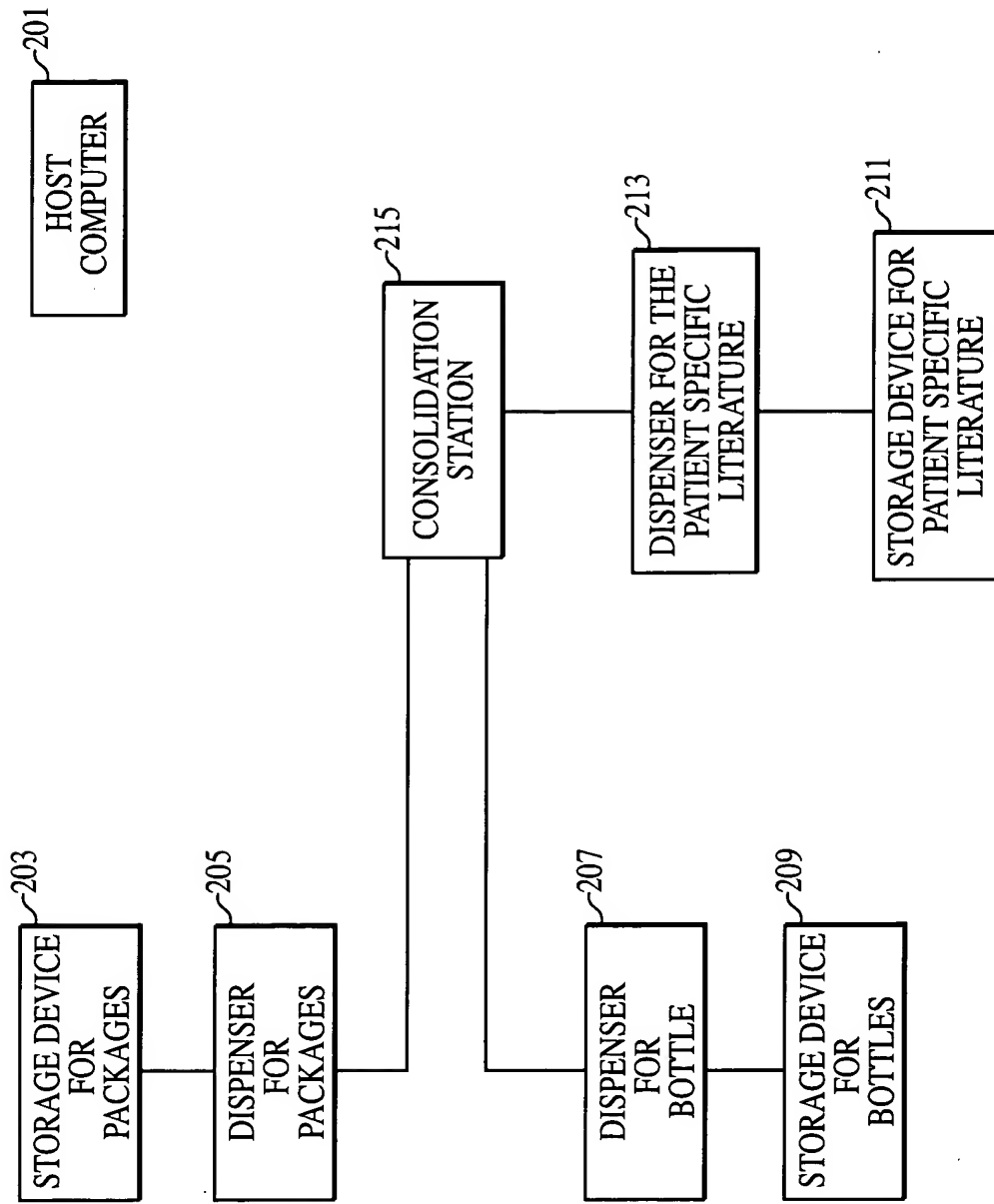


FIG. 2

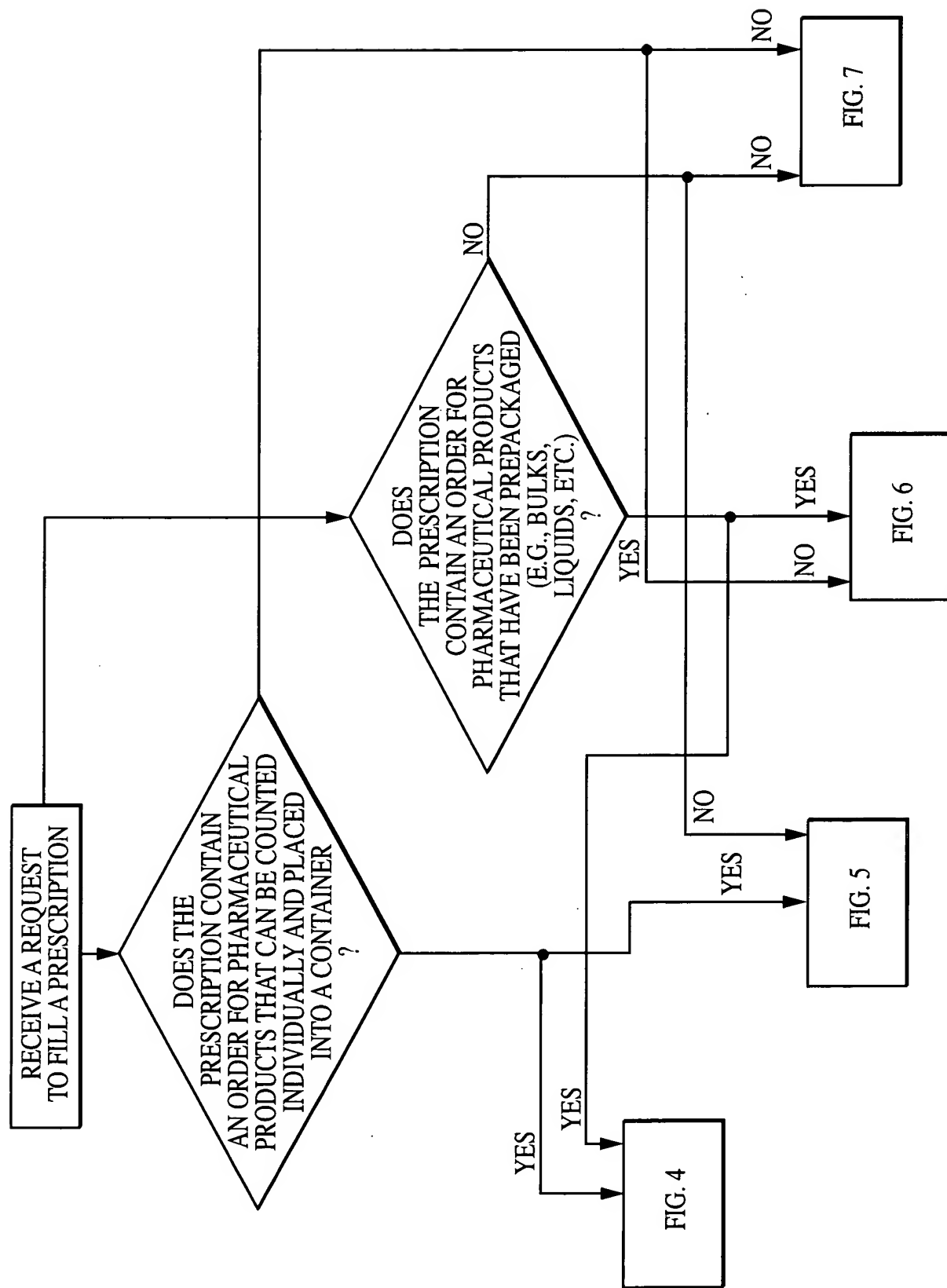


FIG. 3

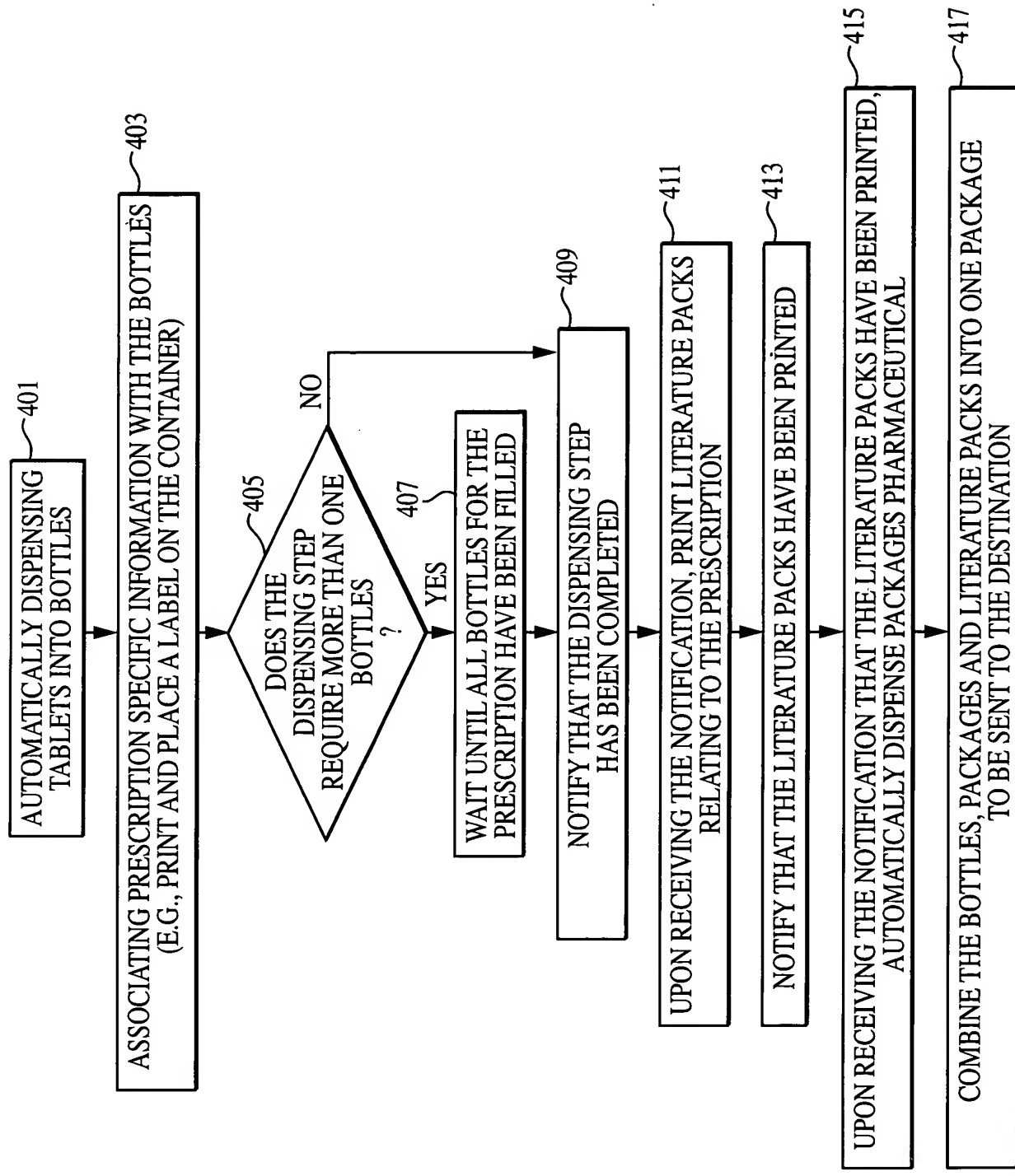


FIG. 4

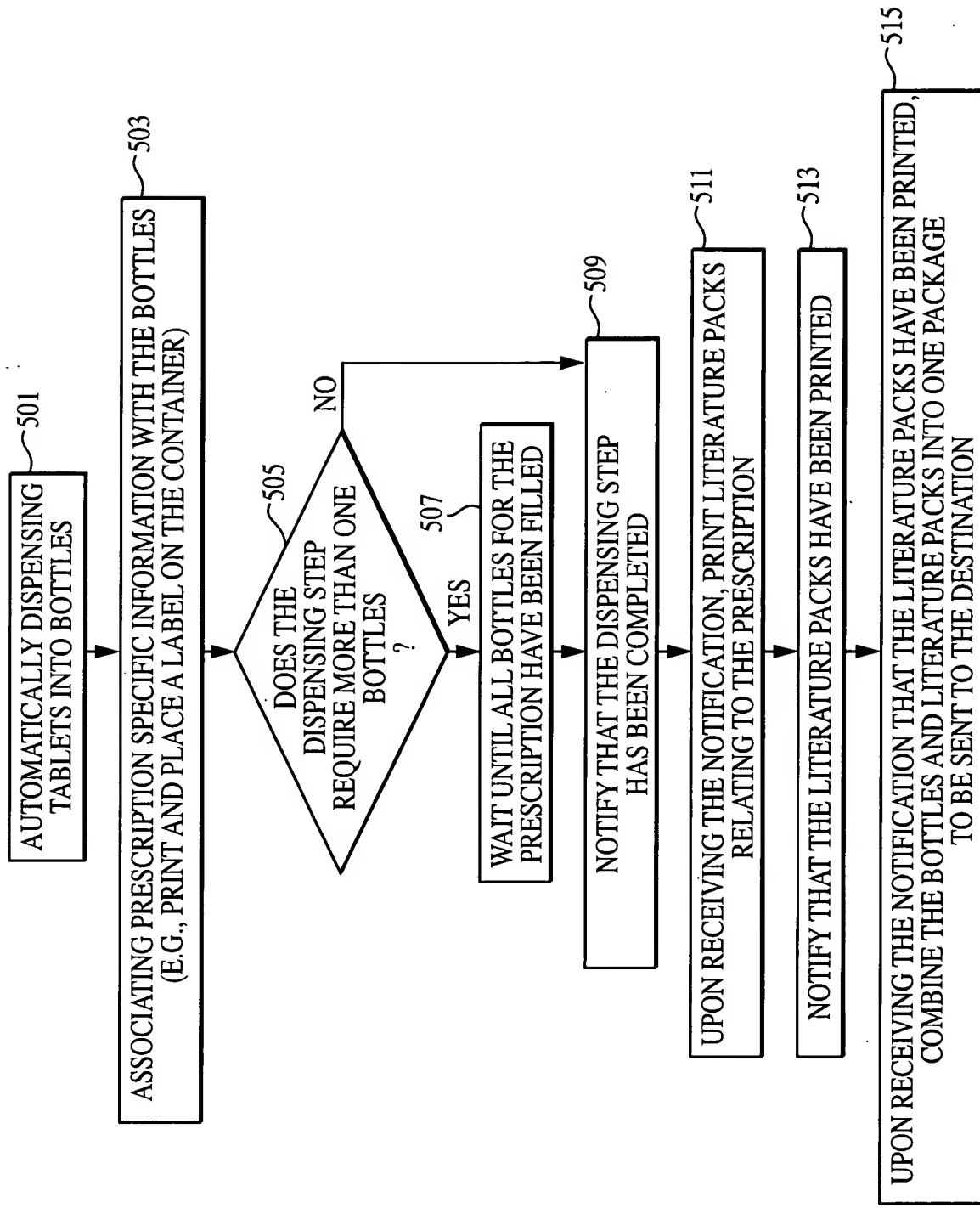


FIG. 5

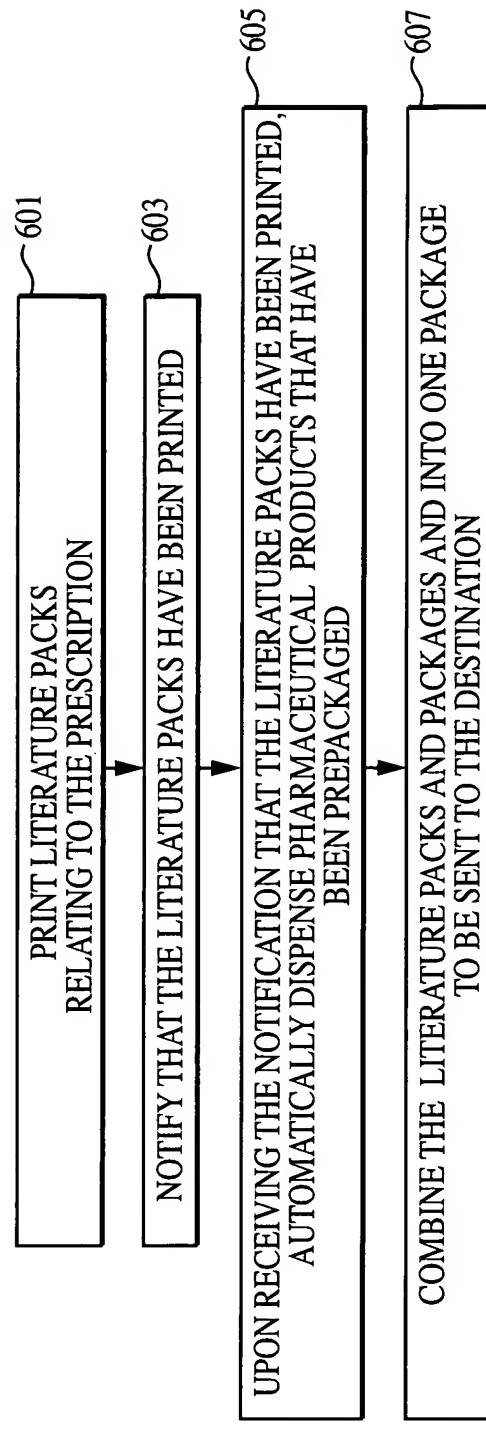


FIG. 6



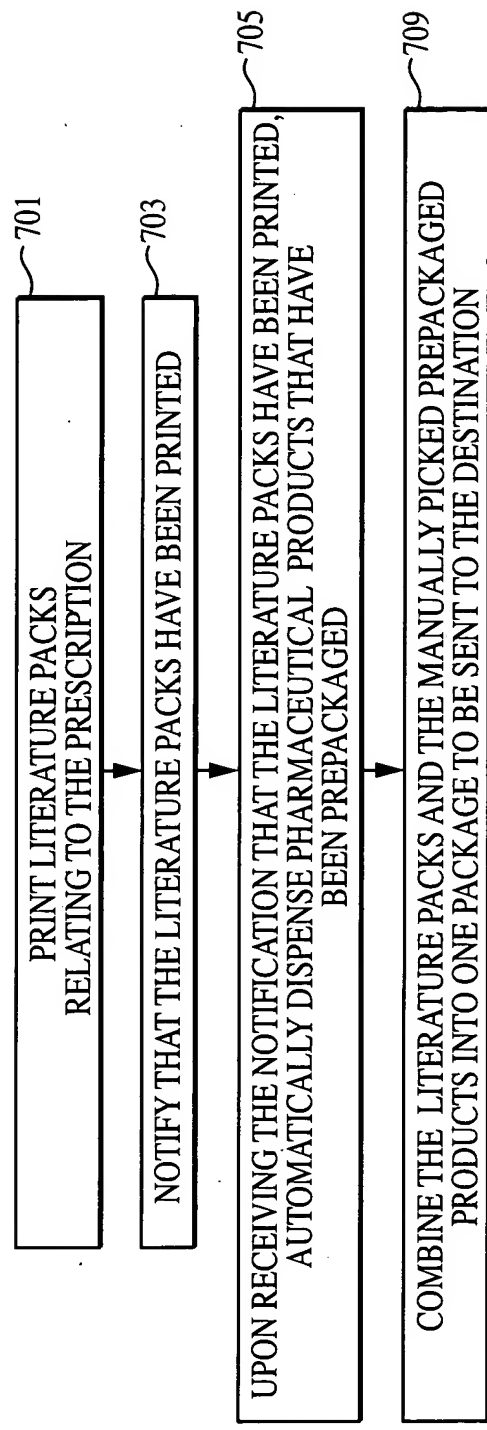
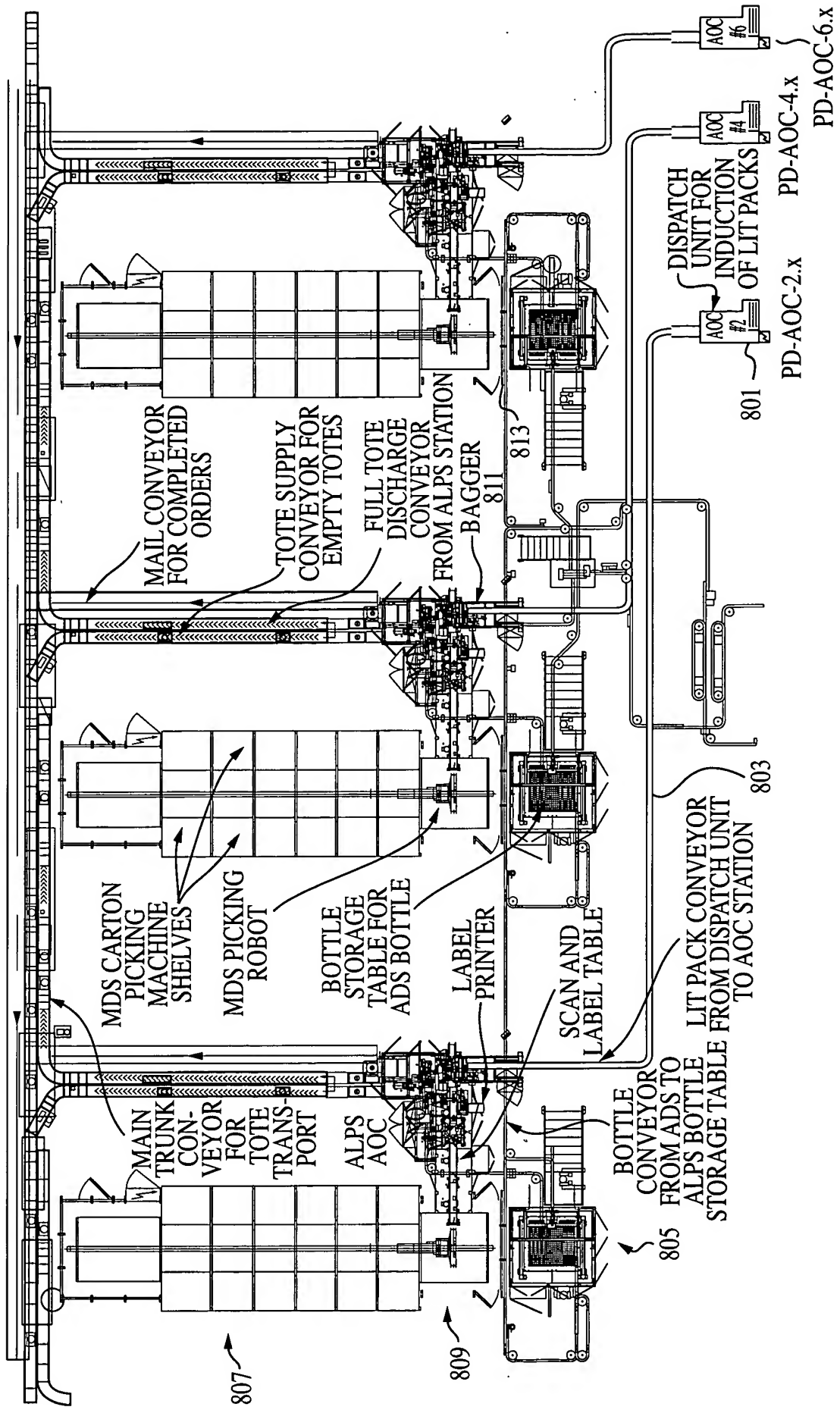


FIG. 7



ALPS OVERALL LAYOUT (3 ALPS SUBSYSTEMS)

FIG. 8

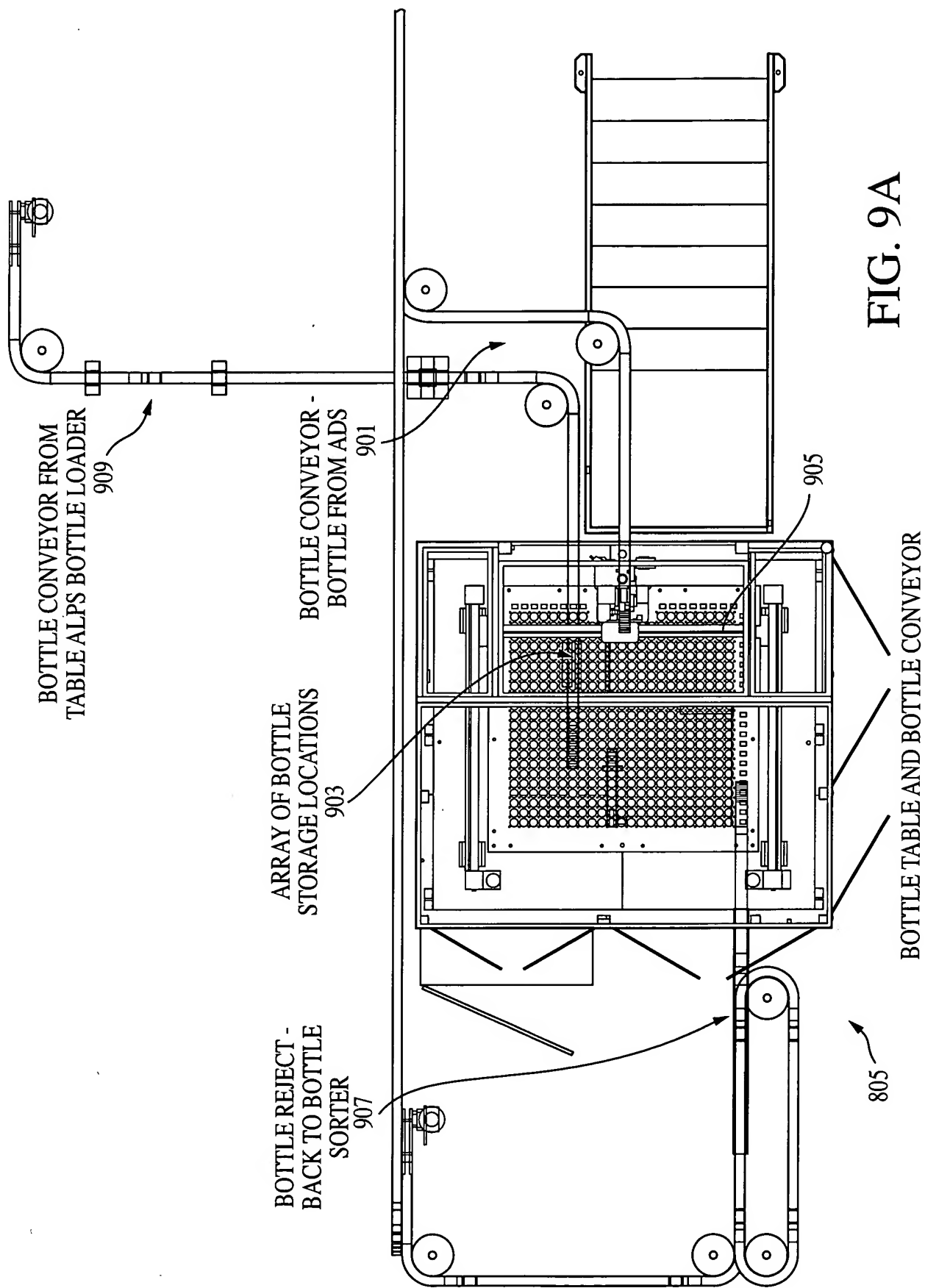


FIG. 9A

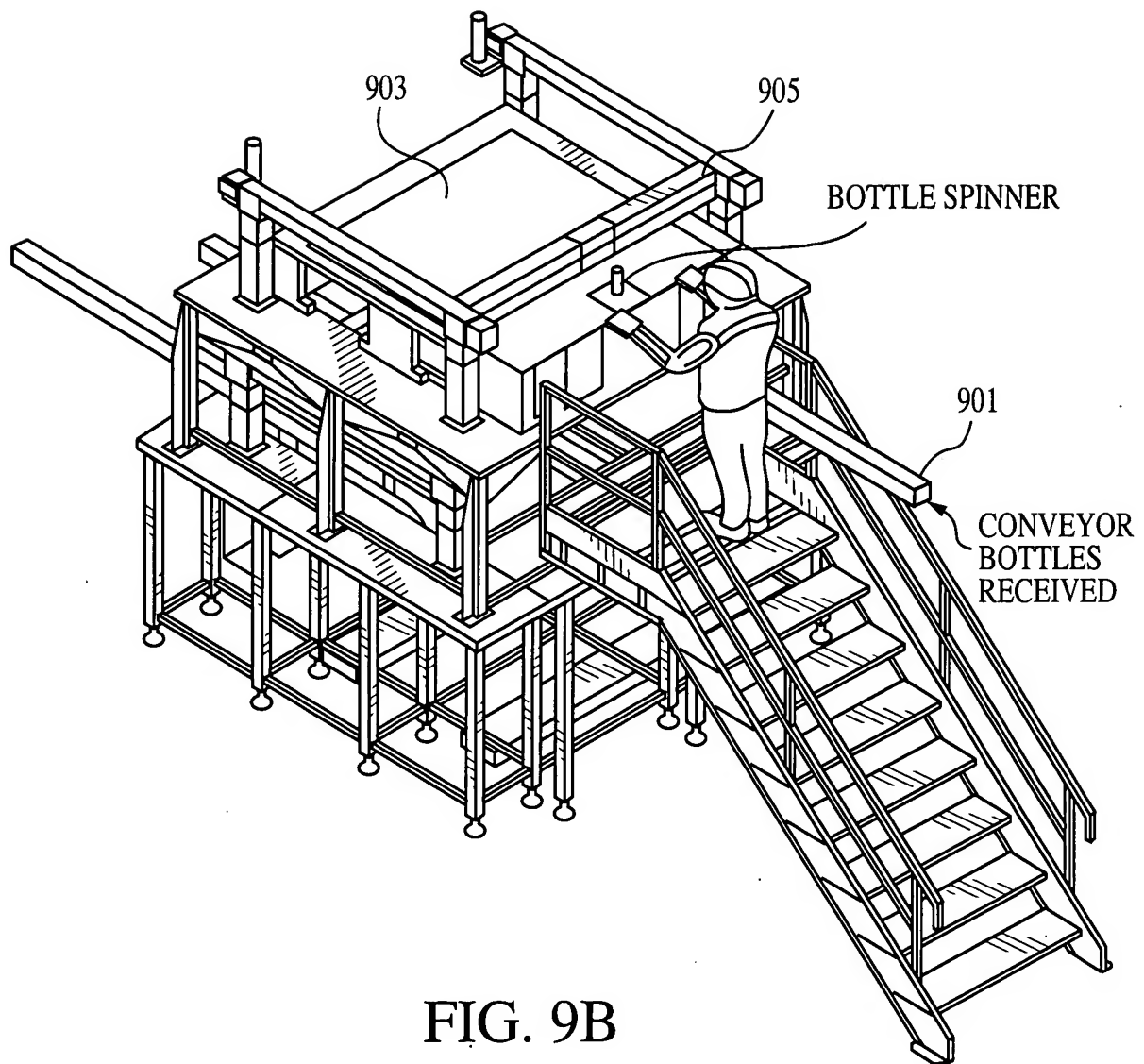


FIG. 9B

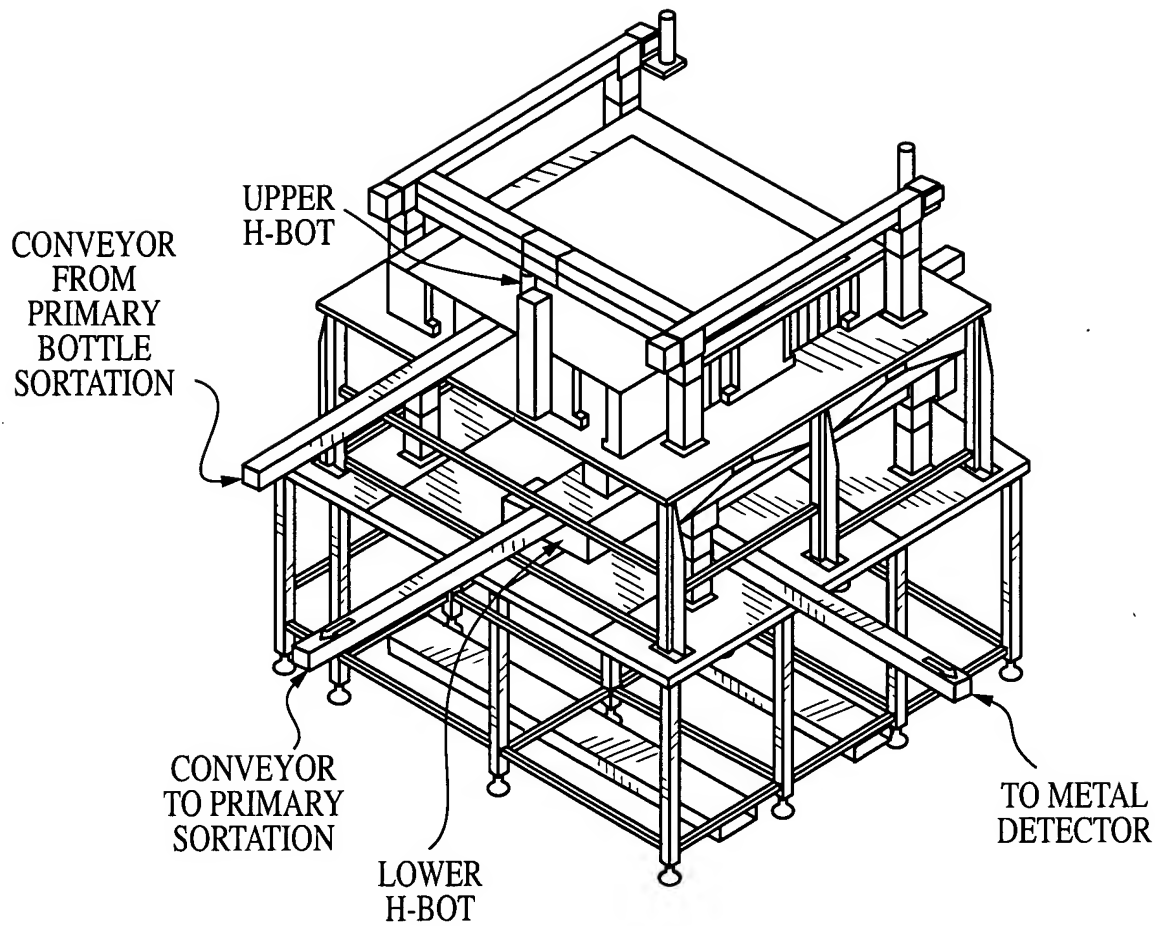


FIG. 9C

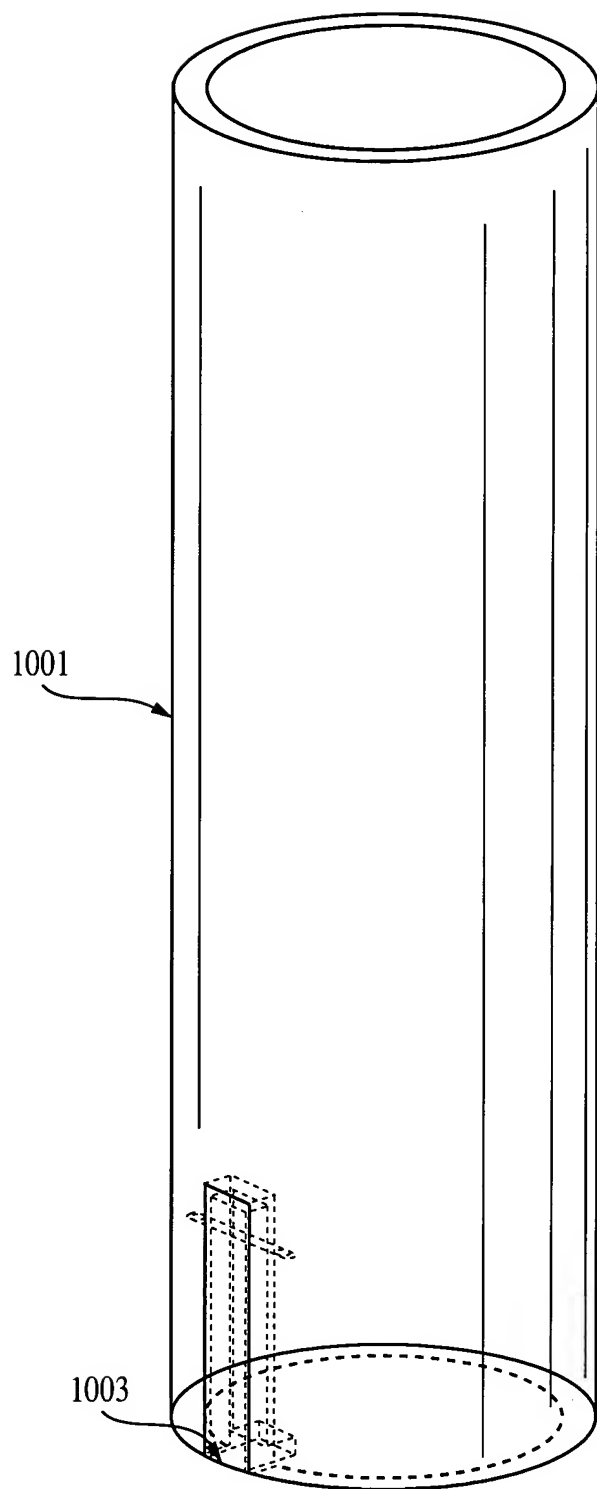


FIG. 10

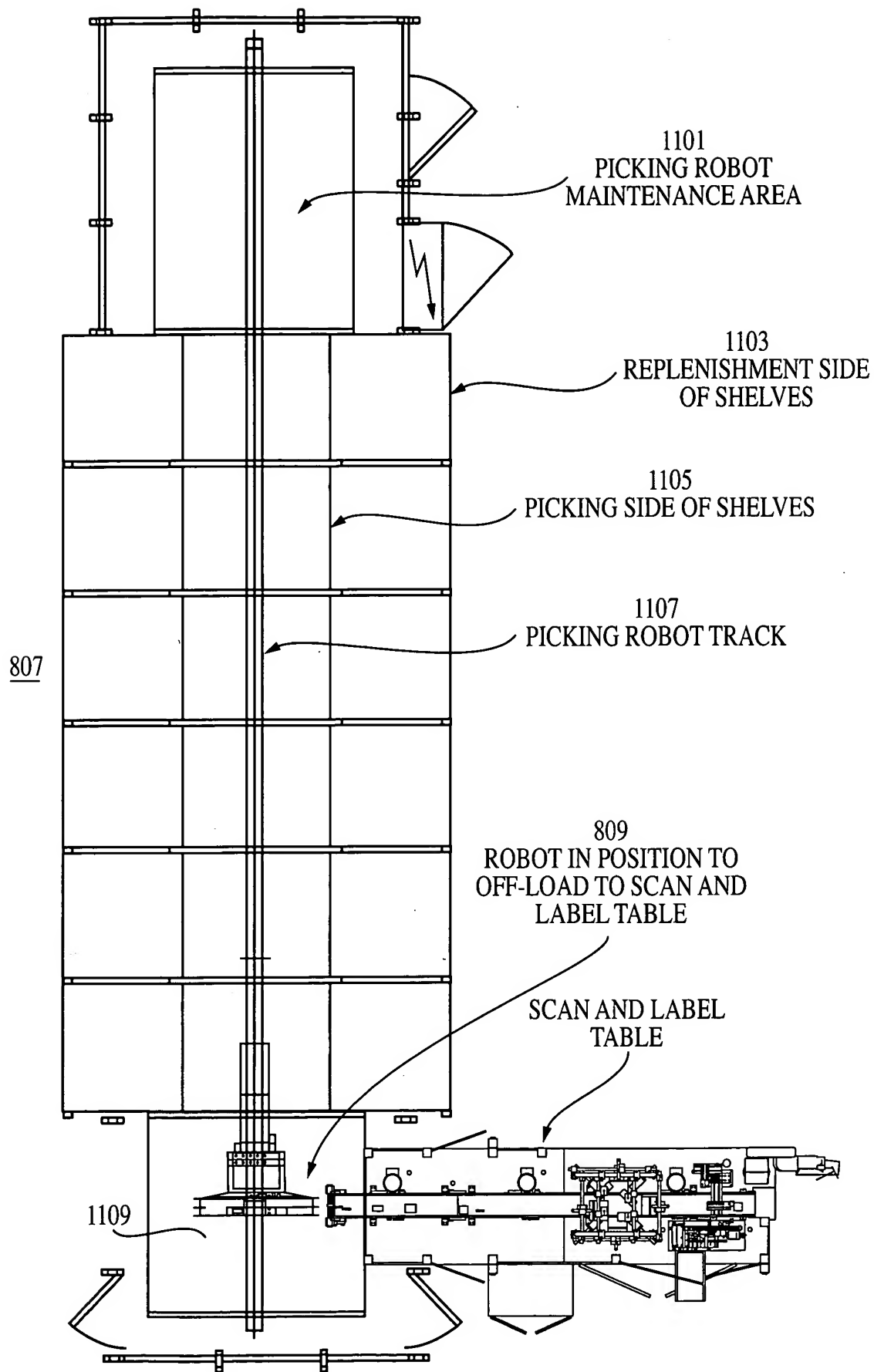


FIG. 11

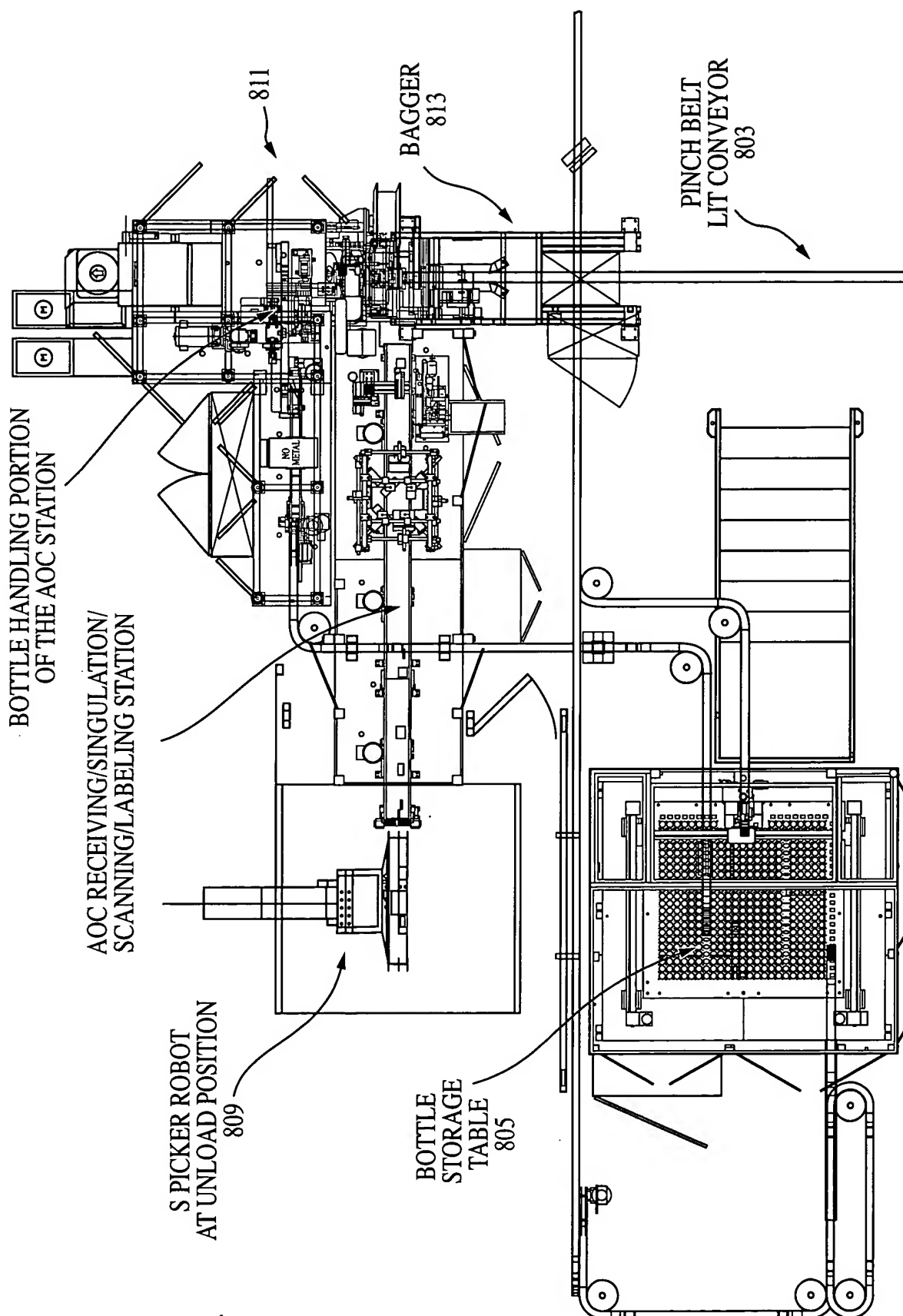


FIG. 12

CLOSE-UP OF AOC STATION (BOTTLE TABLE, MDS, AOC, BAGGER)



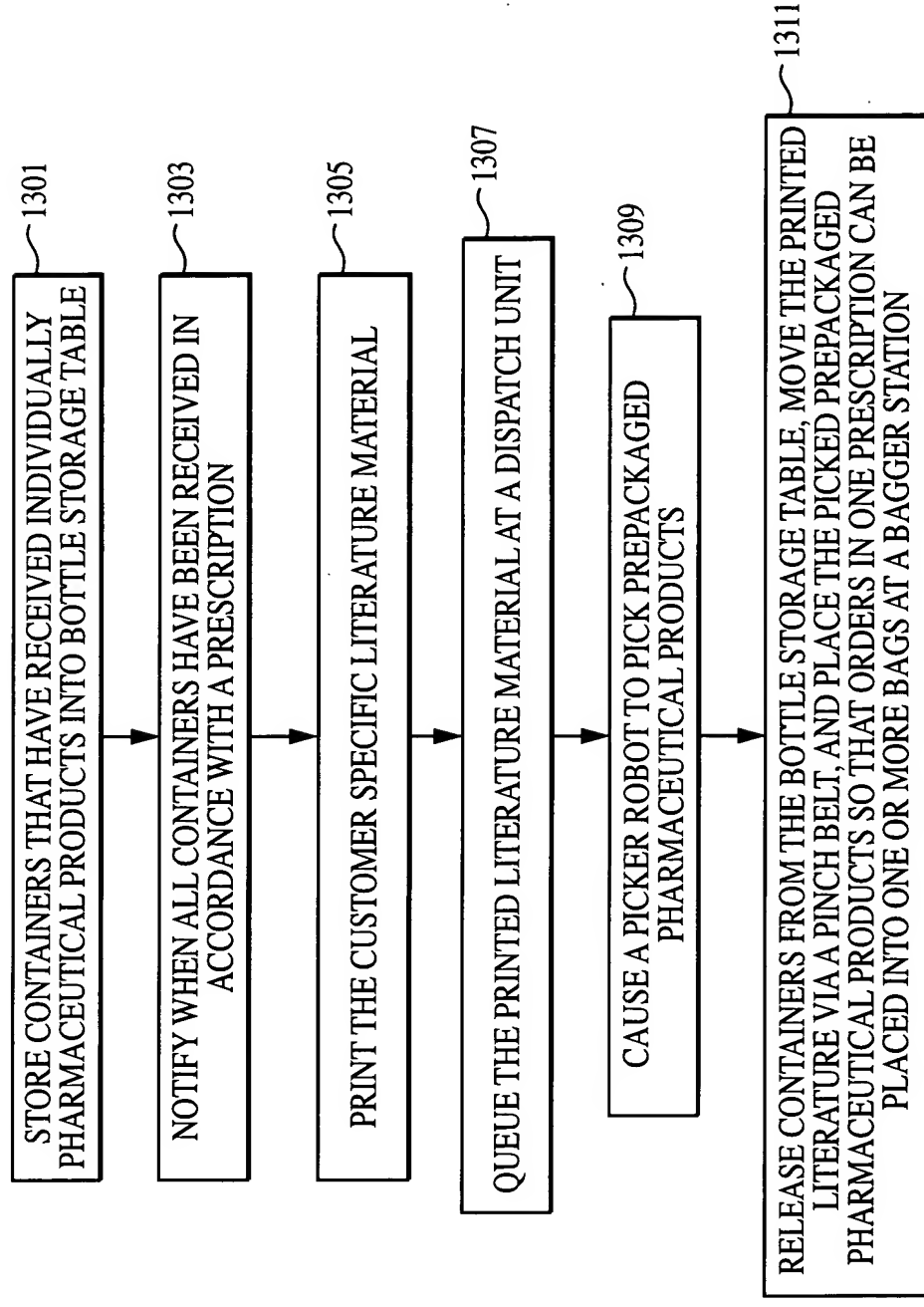


FIG. 13

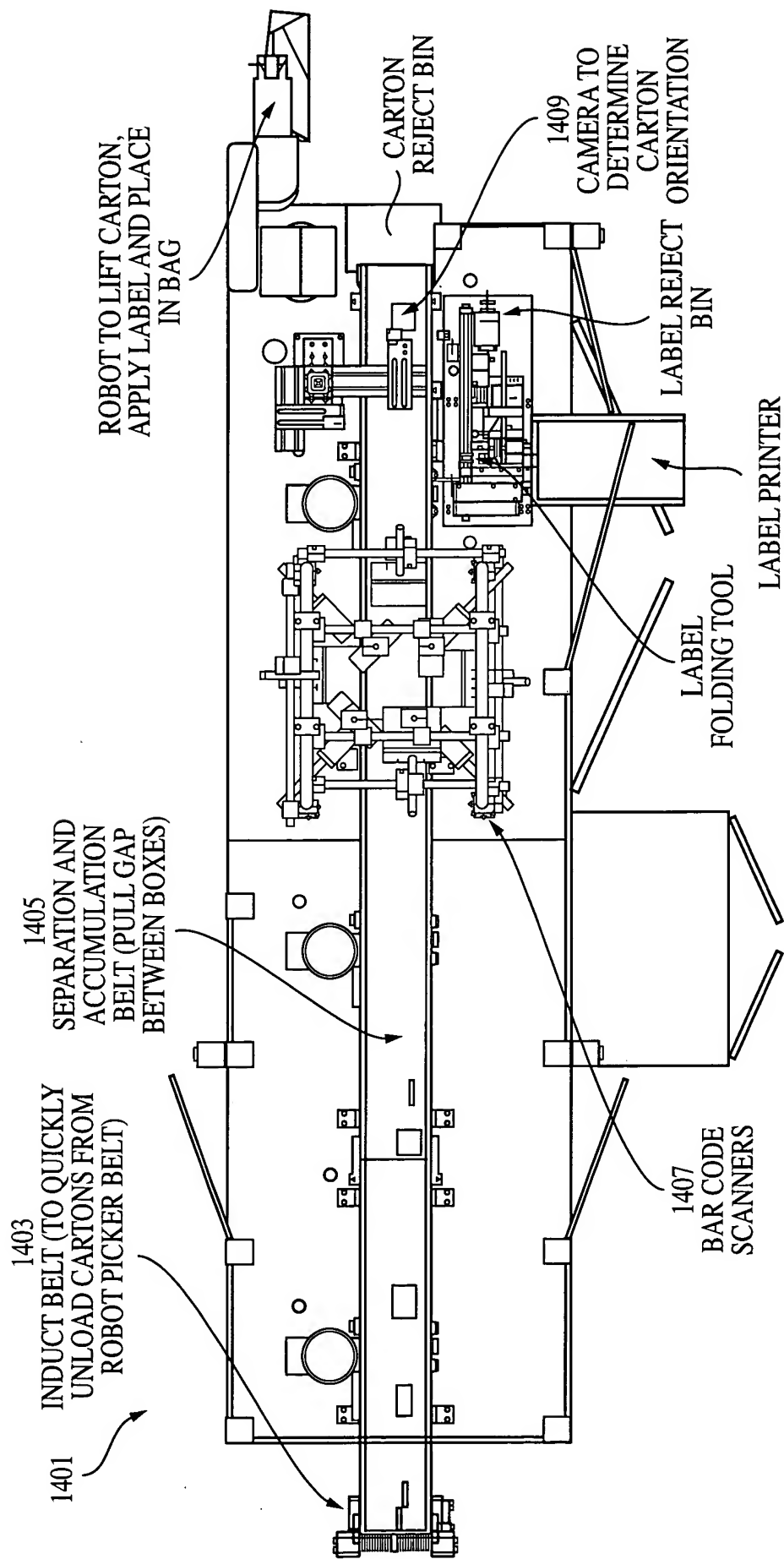


FIG. 14

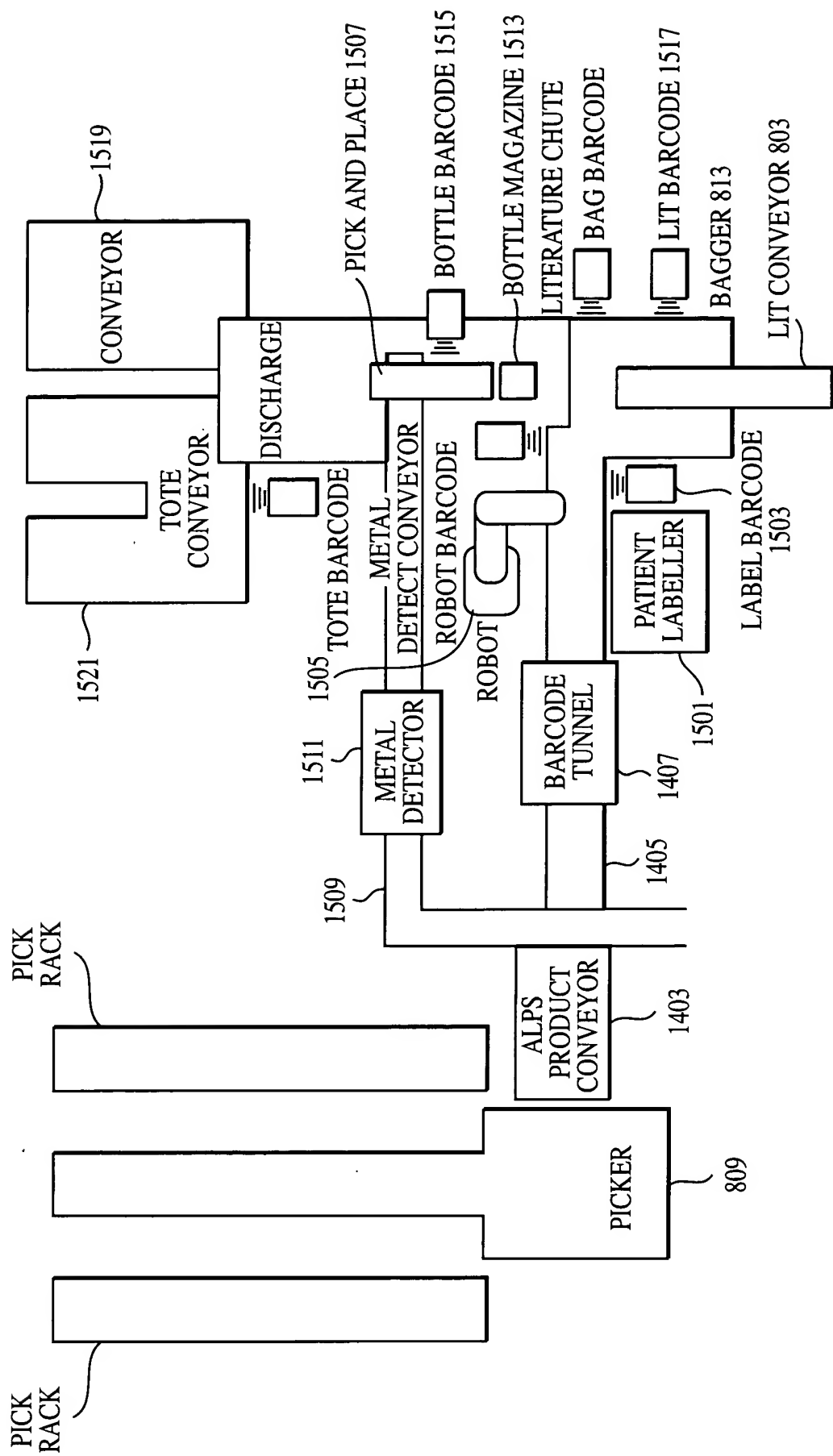


FIG. 15A

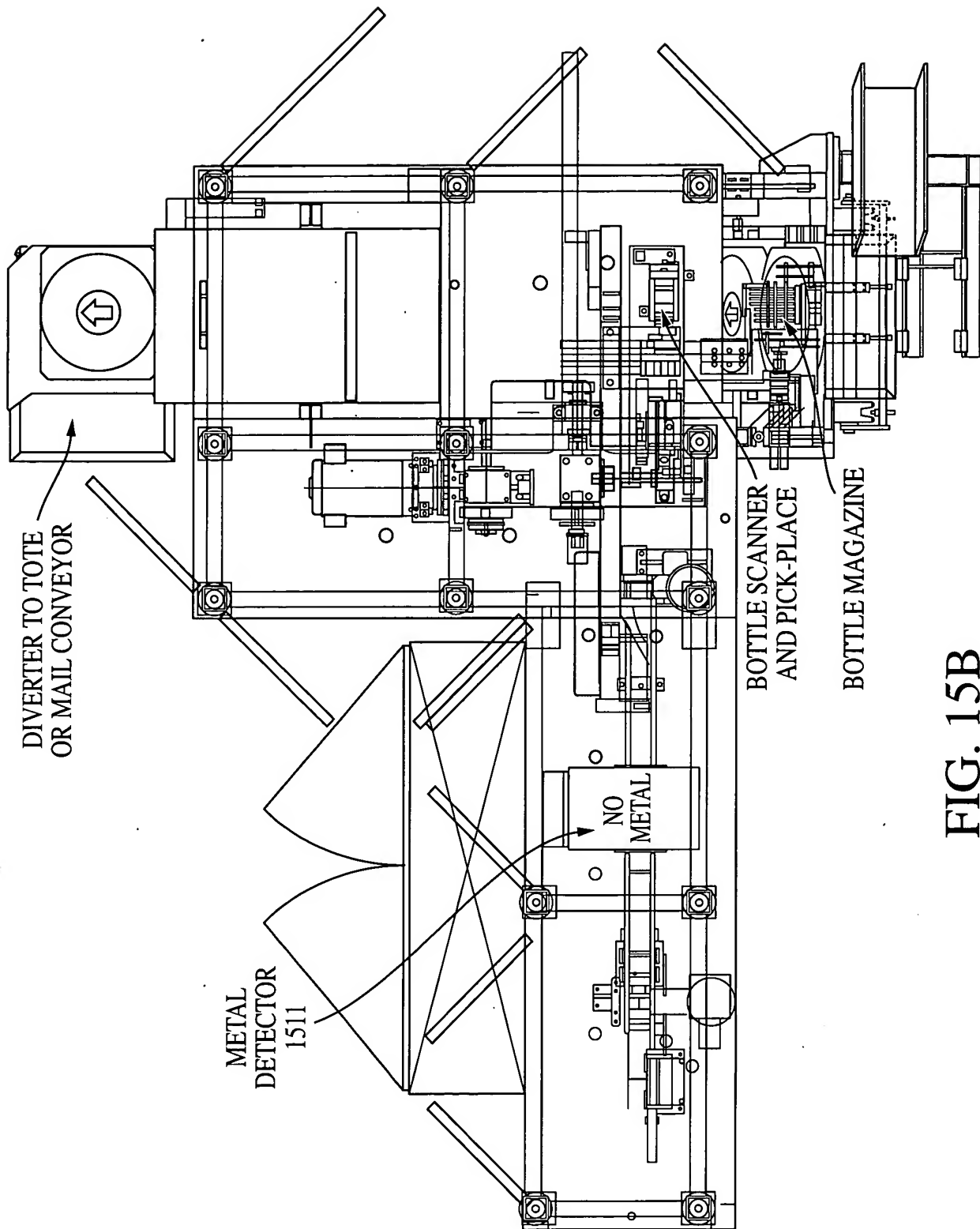


FIG. 15B

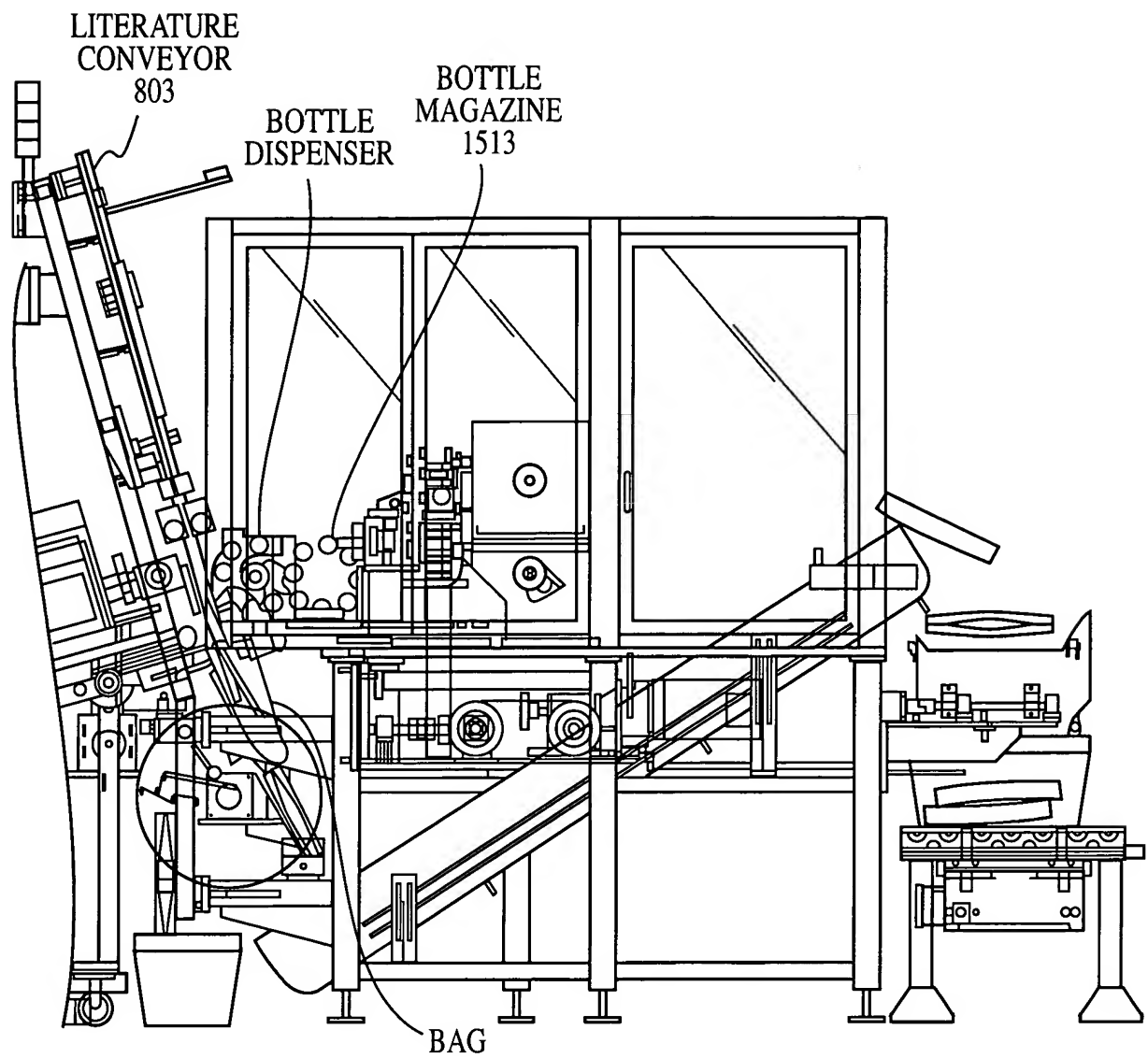


FIG. 15C

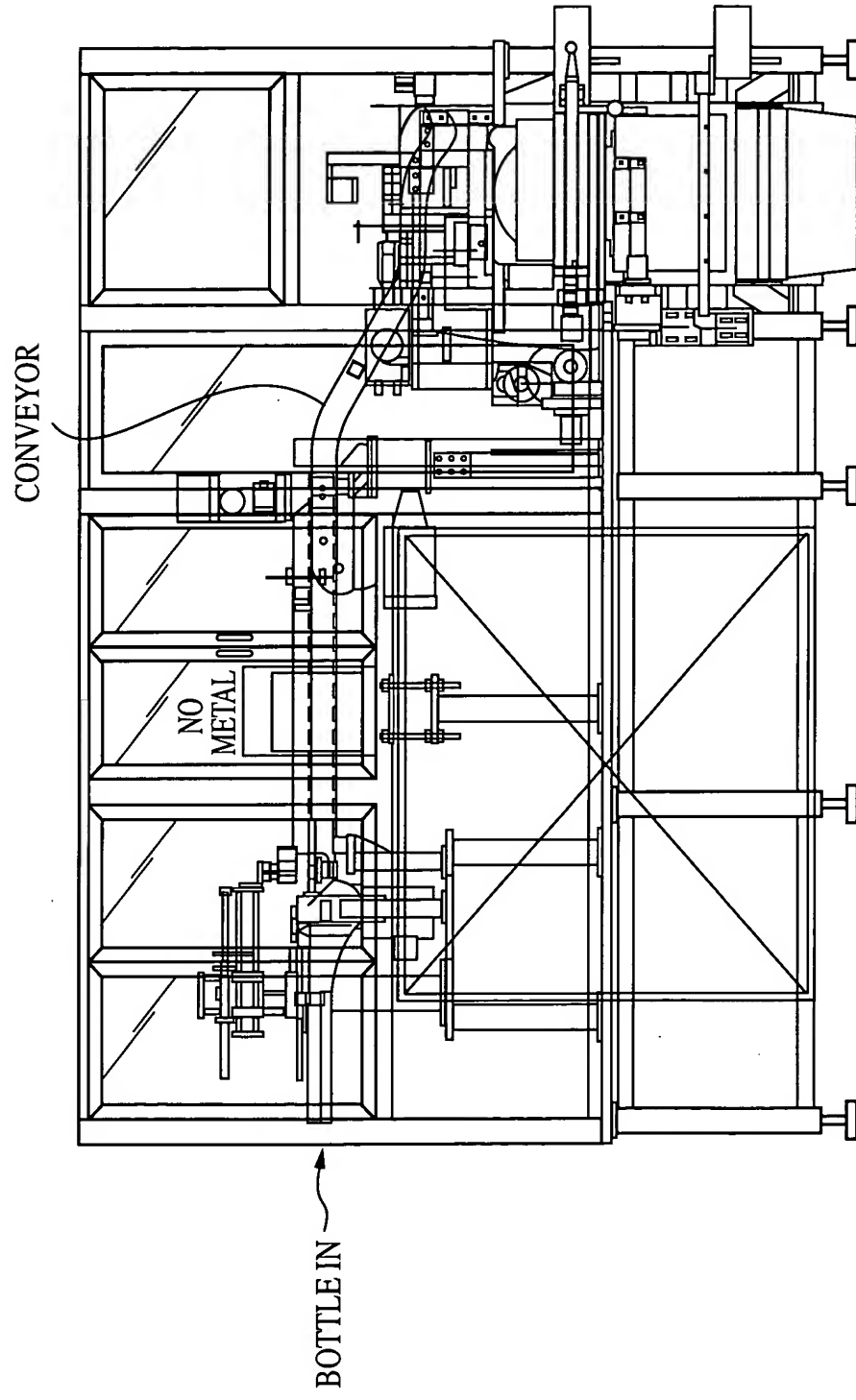


FIG. 15D

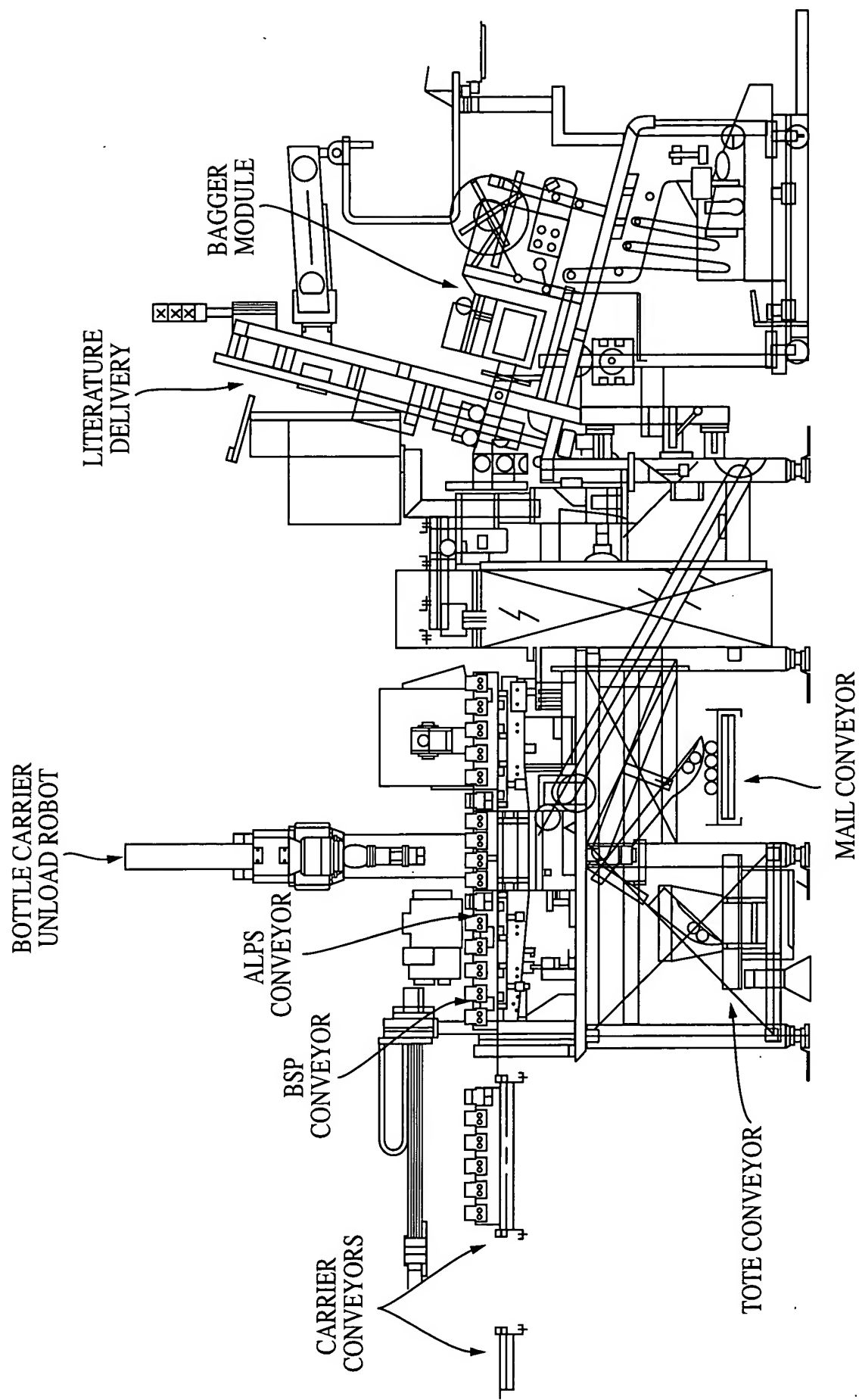


FIG. 15E

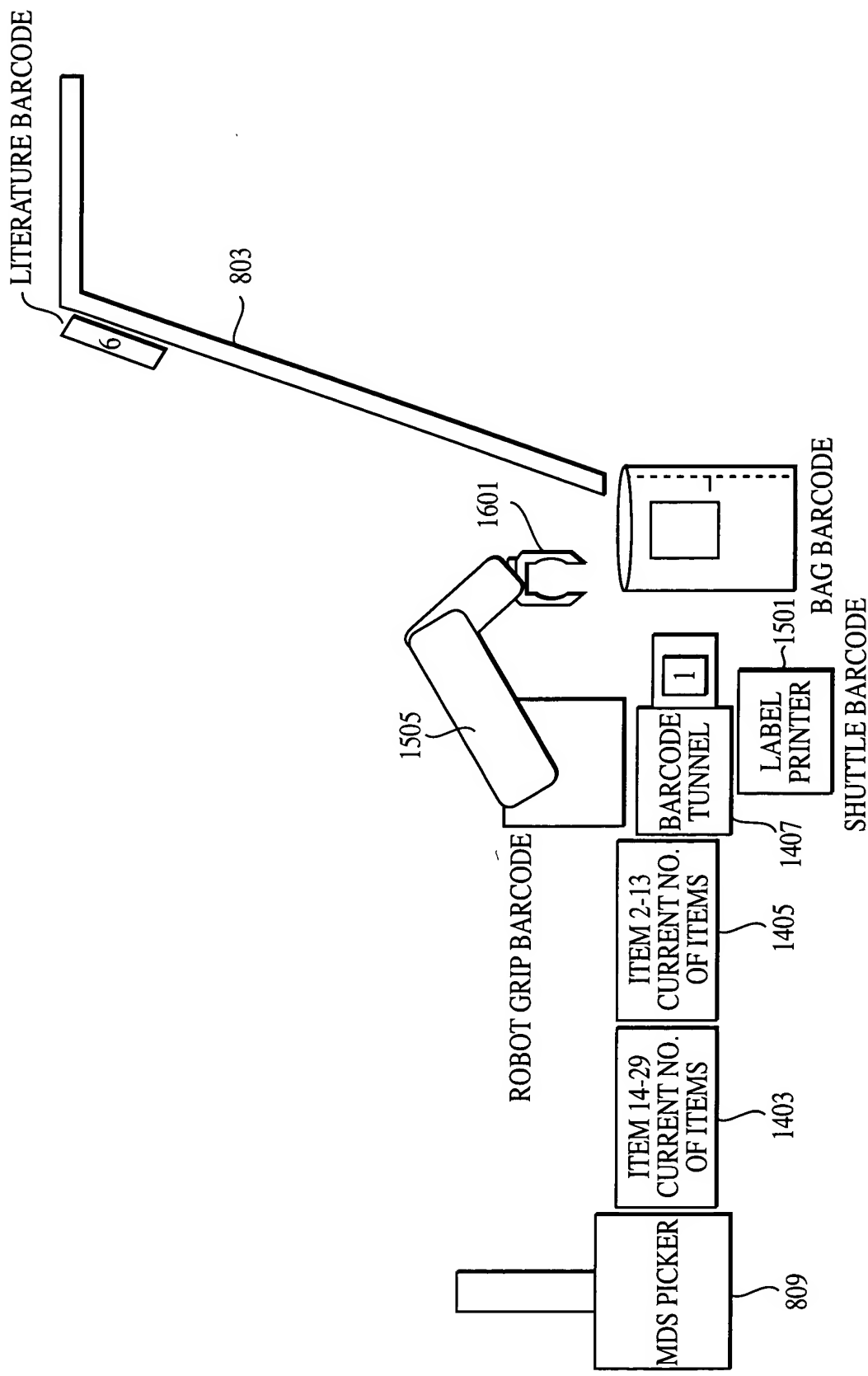


FIG. 16



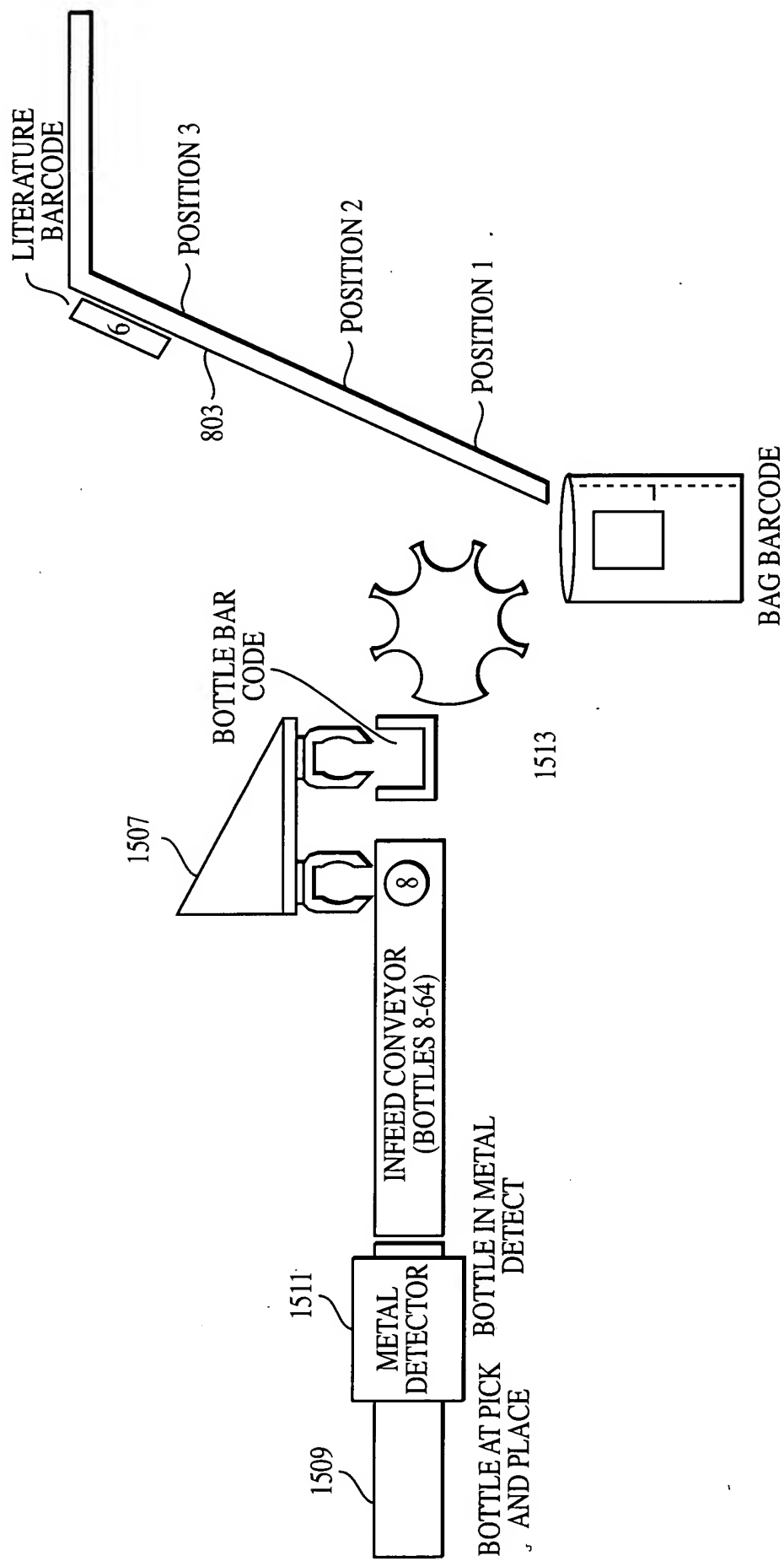


FIG. 17

1801

MERCK-MEDCO RX SERVICES ONE MILLENNIUM DRIVE WILLINGBORO, NJ 08046		PHONE: 1-800-123-4567		DEA#123456789 DATE: 04/19/02	
NAME: JOHN Q. PUBLIC:		DR. Smith		RX: 0123456789 19	
Take one tablet after each meal and one before bedtime.					
Drug Name MFG: MERCK RPHC Wastyle		10mg DISCARD AFTER 1c/Tabl GENERIC SUBSTITUTION FOR CODINE		Tablet ID NO REFILLS ORDER AFTER 20020715	
CAUTION: DO NOT USE WITH ALCOHOL OR NON PRESCRIBED DRUGS WITHOUT CONSULTING THE PRESCRIBING PRACTITIONER					
		QTY: 90 Bottle 1 of 1			
		COPYRIGHT PHARMEX 2000			
		MAY CAUSE DROWSINESS. ALCOHOL MAY INTENSIFY THIS EFFECT. USE CARE WHEN OPERATING A CAR OR DANGEROUS MACHINERY			
		IMPORTANT! FINISH ALL THIS MEDICATION UNLESS OTHERWISE DIRECTED BY PRESCRIBER			
		TAKE MEDICATION ON AN EMPTY STOMACH 1 HOUR BEFORE OR 2 TO 3 HOUR AFTER A MEAL UNLESS OTHERWISE DIRECTED BY YOUR DOCTOR.			
		DO NOT TAKE DAIRY PRODUCTS, ANTACIDS, OR IRON PREPARATIONS WITHIN ONE HOUR OF THIS MEDICATION.			
		AOC 1 17:42:55			
		John Q. Public			
		25000018010022			
		Please Open Here To View The Patient Label			



01234567891234

JOHN Q. PUBLICXXXXXXXXXX

Please Open Here  
To View The  
Patient Label

1803

FIG. 18

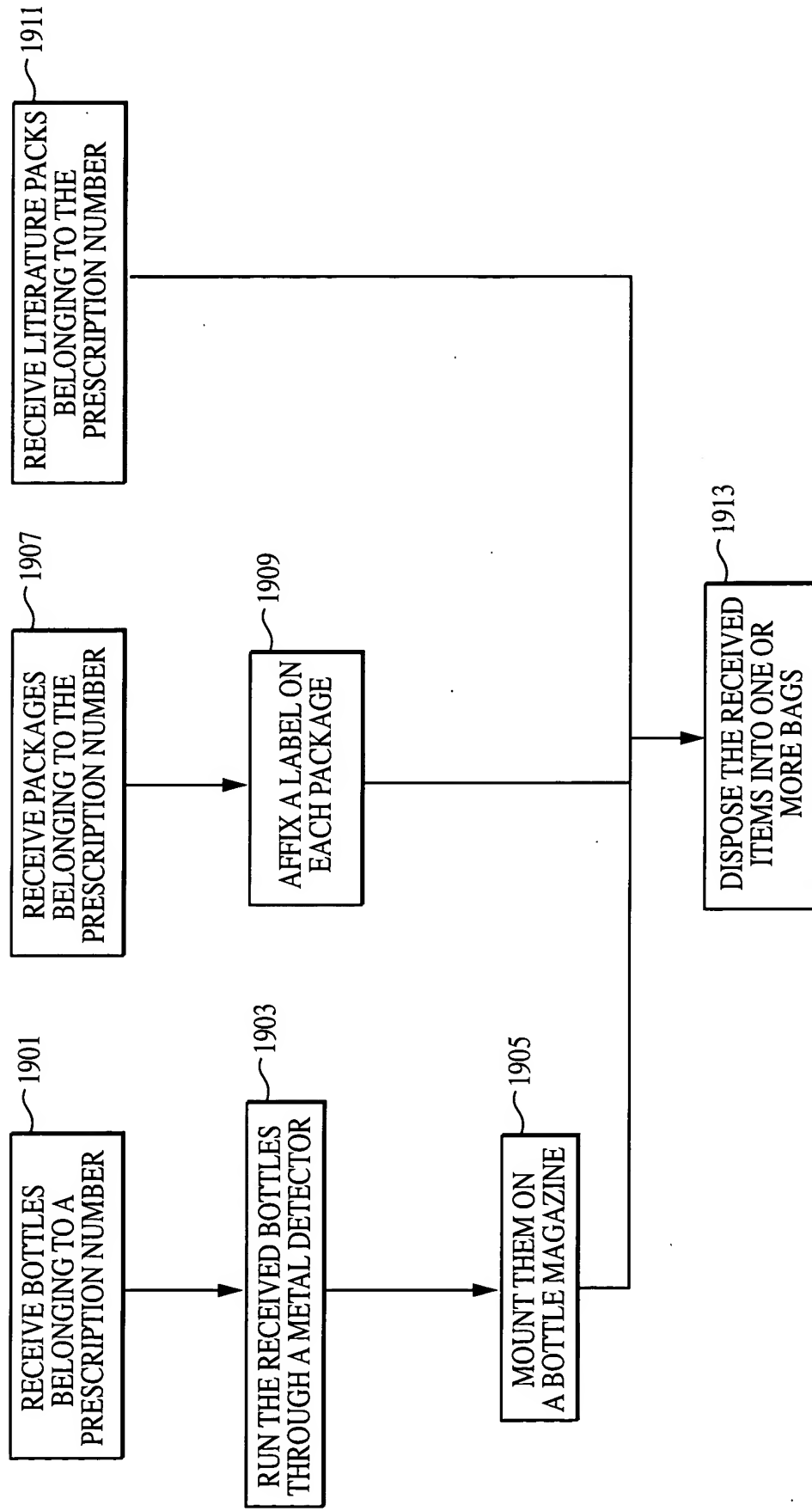
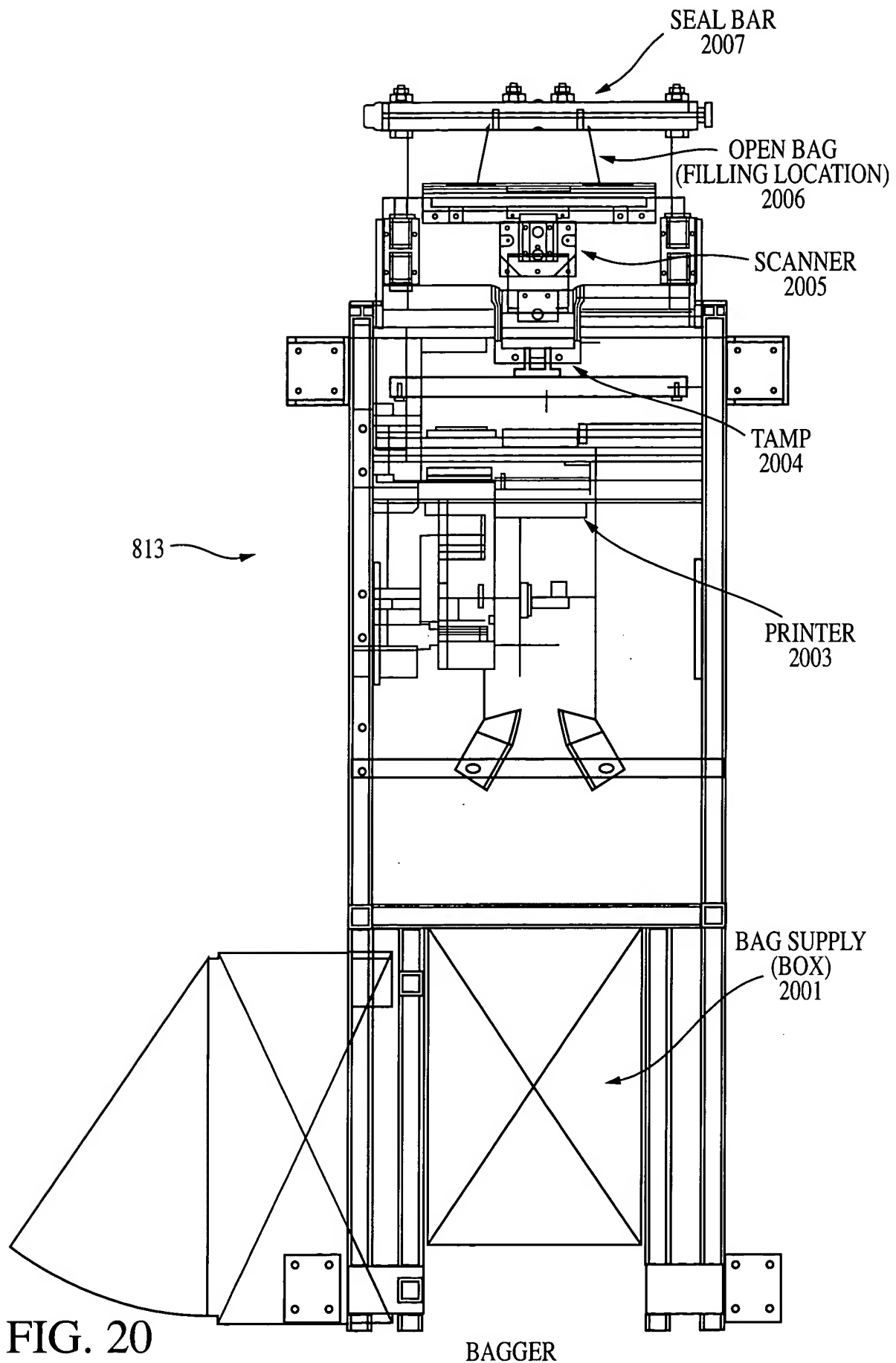


FIG. 19



The diagram illustrates the control logic for a bottle labeling system. At the center is the **CONSOLIDATION LOGIC 2101**, which acts as the central hub for data and control signals.

**Input/Status Signals to Consolidation Logic 2101:**

- DISPATCHER/PINCHBELT** (top left) sends a **LIT TIMEOUT** signal.
- LIT AT END OF BELT** (top center) sends a signal.
- LIT STATUS (1,2,3)** (top right) sends a signal.
- LIT 2->3** (top right) sends a signal.
- LIT 1->2** (top right) sends a signal.
- REJECT LIT** (top right) sends a signal.
- LIT 2-> BAG** (top right) sends a signal.
- LIT 3-> BAG** (top right) sends a signal.
- LIT 2-> DISC CONV.** (top right) sends a signal.
- CURRENT BAG #** (top right) sends a signal.
- NEXT LIT BATCH FLAG** (top right) sends a signal.
- SEAL AND AND DROP BAG** (top right) sends a signal.
- QUEUE BAG #** (top right) sends a signal.
- DESIRED BAG #** (top right) sends a signal.
- VALIDATED BAG HANGING** (top right) sends a signal.
- PICKER STATUS** (top right) sends a signal.
- PICK BAG ORDER #** (top right) sends a signal.
- TRANSFER TO CONVEYOR** (top right) sends a signal.
- PICKER/PRINT ORDER GENERATION** (top right) sends a signal.

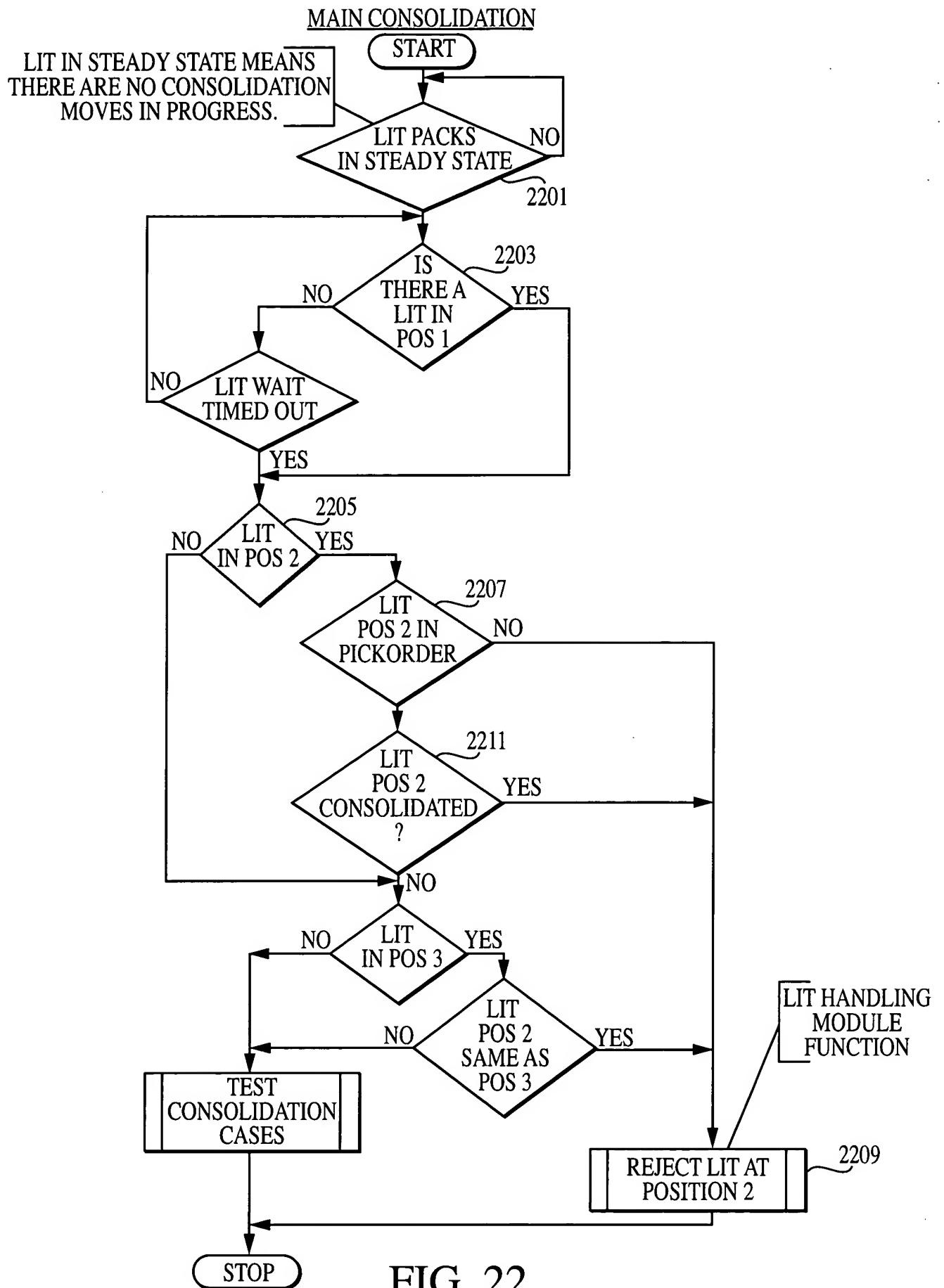
**Control Signals from Consolidation Logic 2101:**

- To **ROBOT 2105** (bottom left): **DROP BOTTLES**, **PICK CARTON**, **DROP CARTON TO BAG**, **APPLY LABEL**, **REJECT LABEL**.
- To **PATIENT LABEL PRINTER 2107** (bottom center): **PRINT LABEL**, **LABEL PRINT STATUS**.
- To **BAGGER 2109** (bottom right): **SEAL AND AND DROP BAG**, **DESIRED BAG #**, **VALIDATED BAG HANGING**.
- To **MDS PICKER** (bottom right): **PICKER STATUS**, **TRANSFER TO CONVEYOR**.

**System Components and Buffers:**

- BOTTLE TABLE/MAGAZINE** (bottom left) and **BOTTLES TO MAGAZINE** (bottom left) are part of the input stage.
- BOTTLES IN MAG** (bottom center) is a buffer between the input and the robot.
- DISPATCHER/PINCHBELT** (top left) is the source of the LIT TIMEOUT signal.
- LIT HANDLING 2103** (top center) receives signals from the LIT status and LIT 1->2, 2->3, 2->BAG, 3->BAG, and 2->DISC CONV. signals.
- PICK/PRINT ORDER GENERATION** (top right) is the source of the PICKER/PRINT ORDER GENERATION signal.

FIG. 21



CONSOLIDATION CASE 1:  
DROP LIT ONLY TO DISCHARGE CONVEYOR

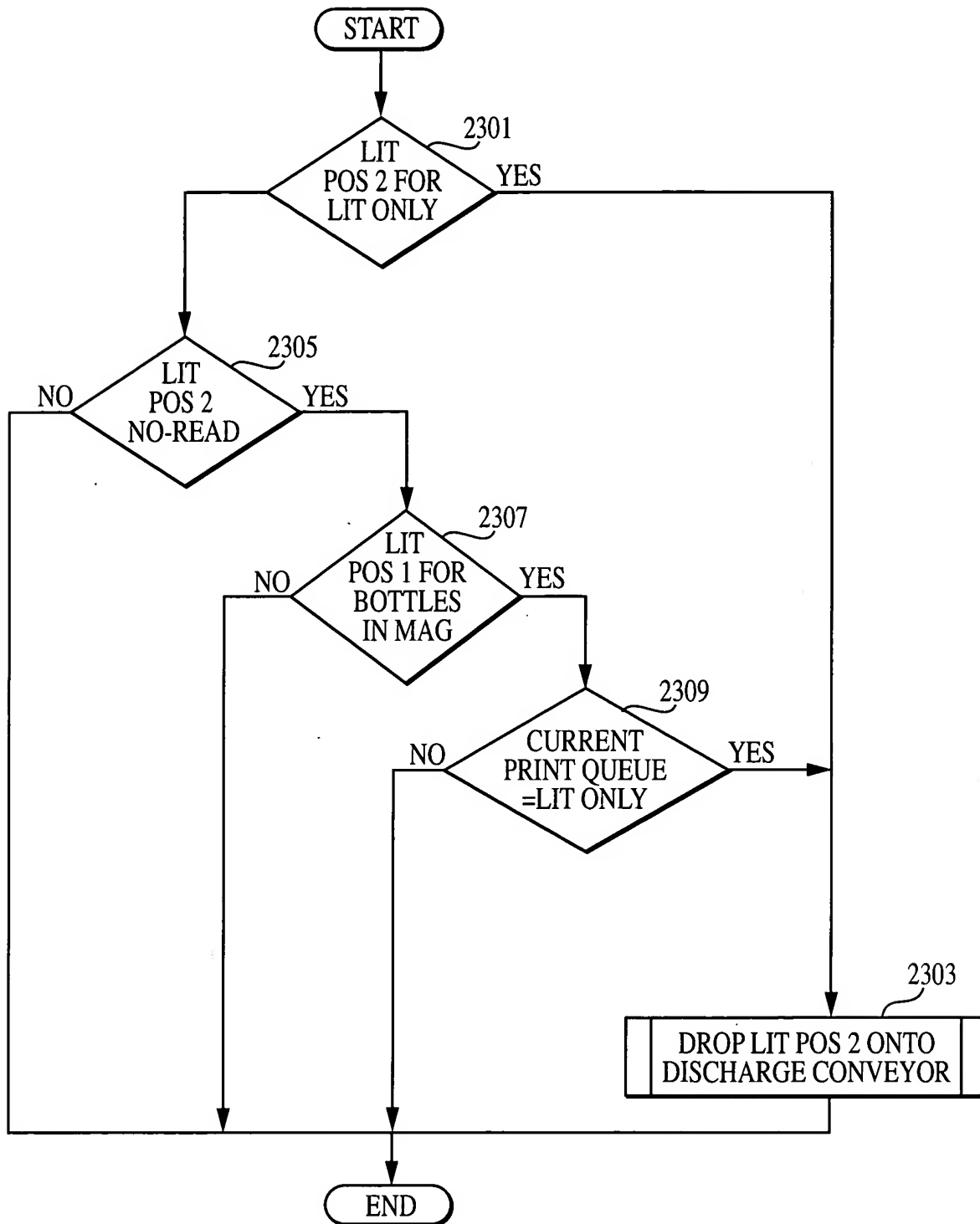


FIG. 23

CONSOLIDATION CASE 2:  
DROP LIT POSITION 2 INTO BAG

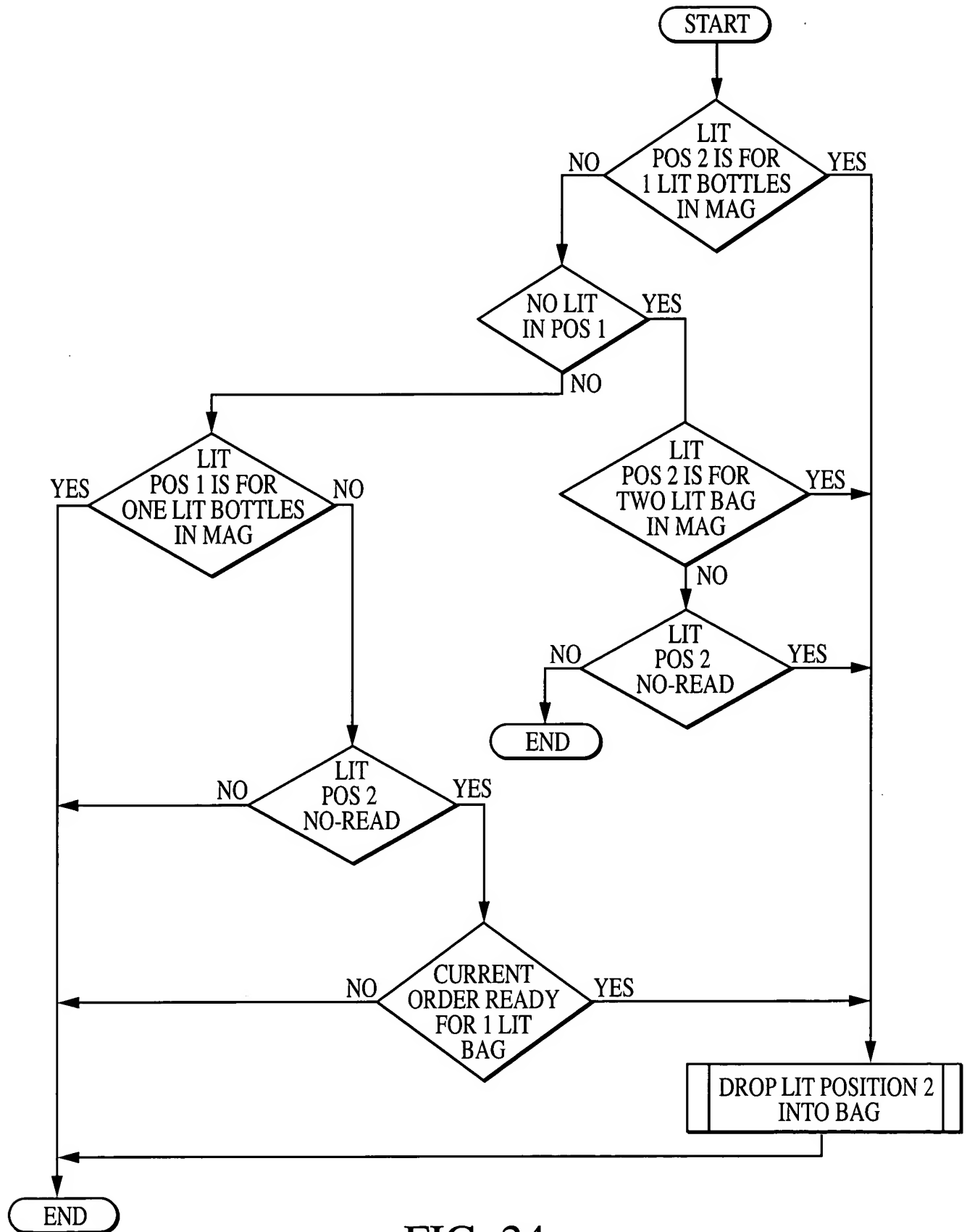
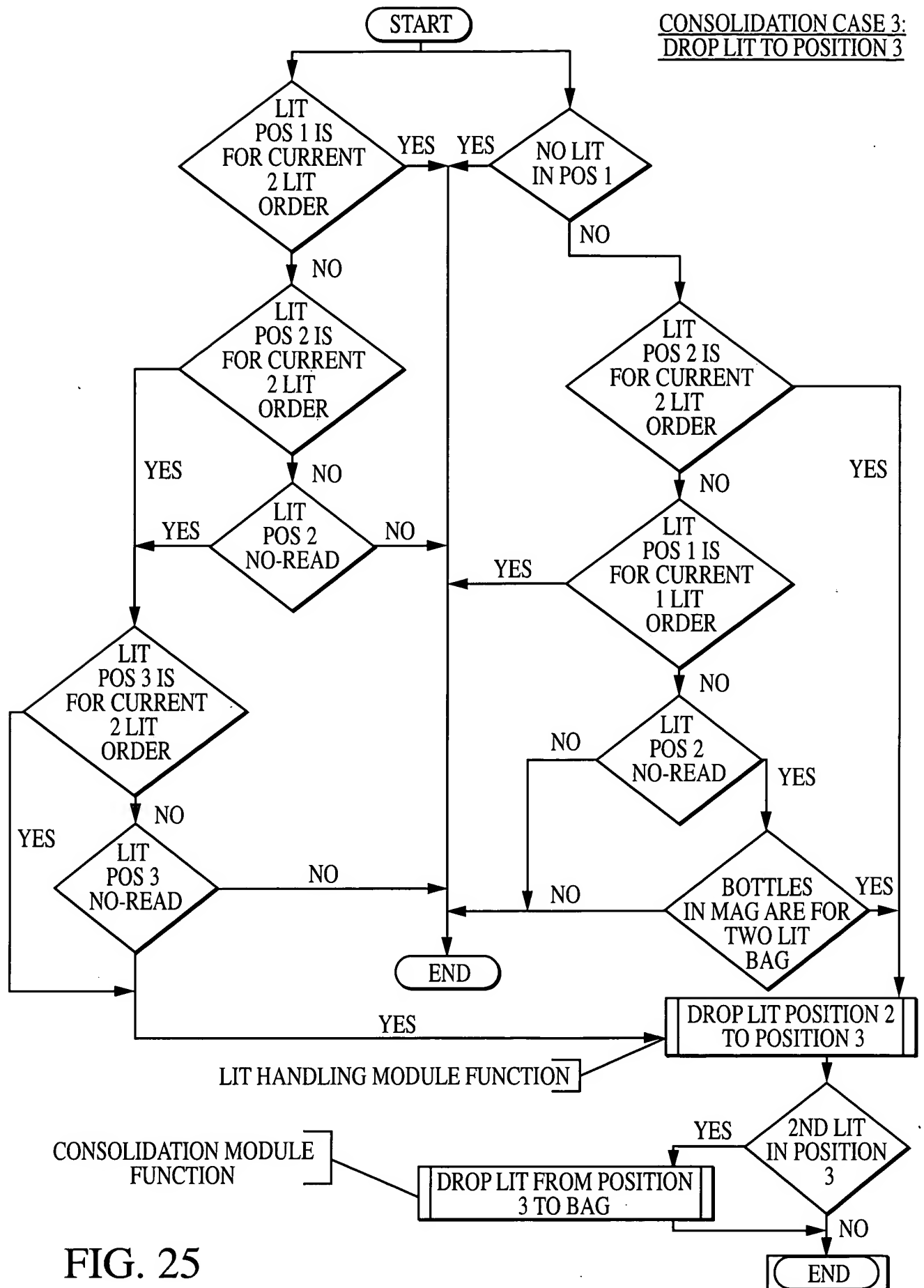
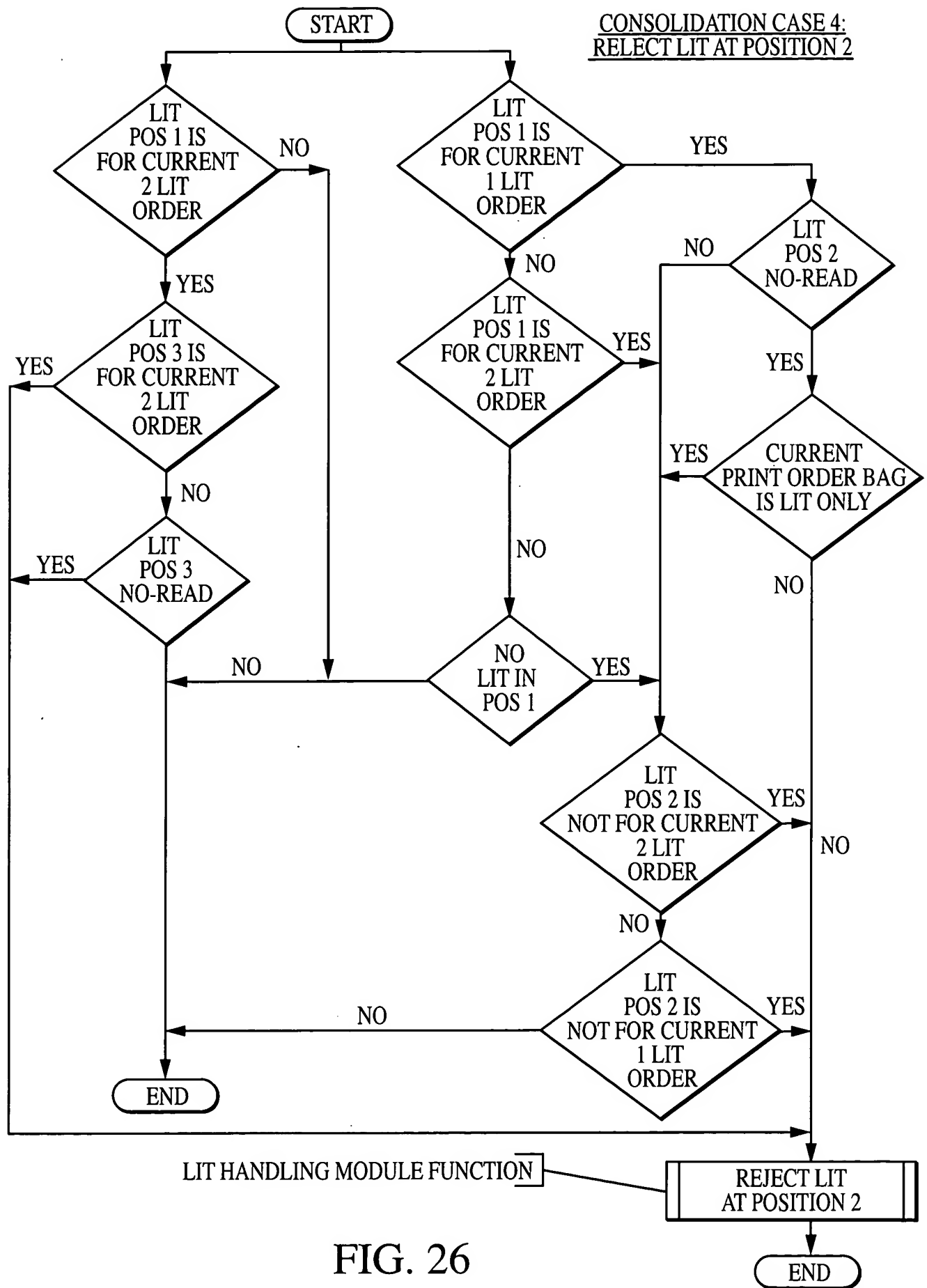


FIG. 24







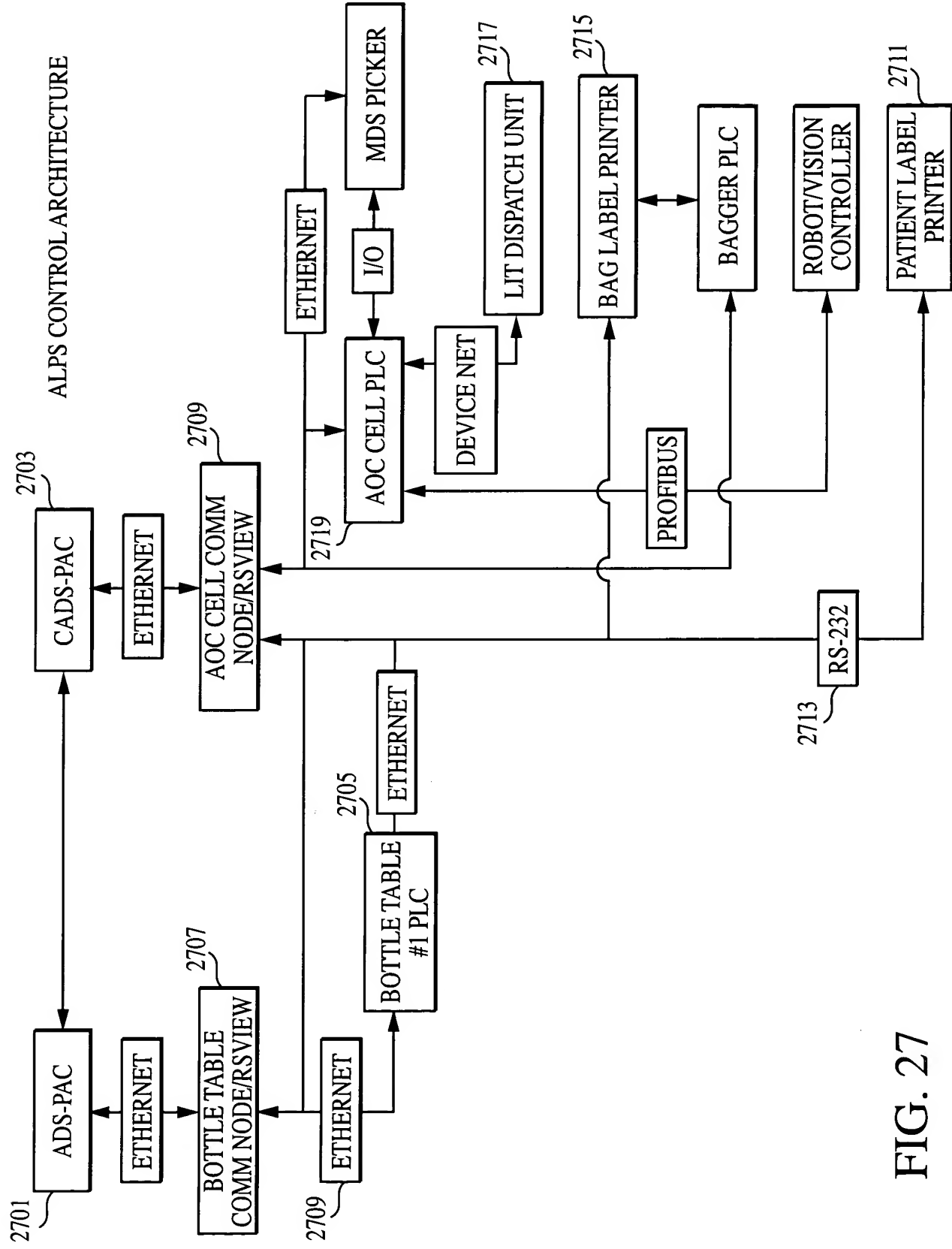
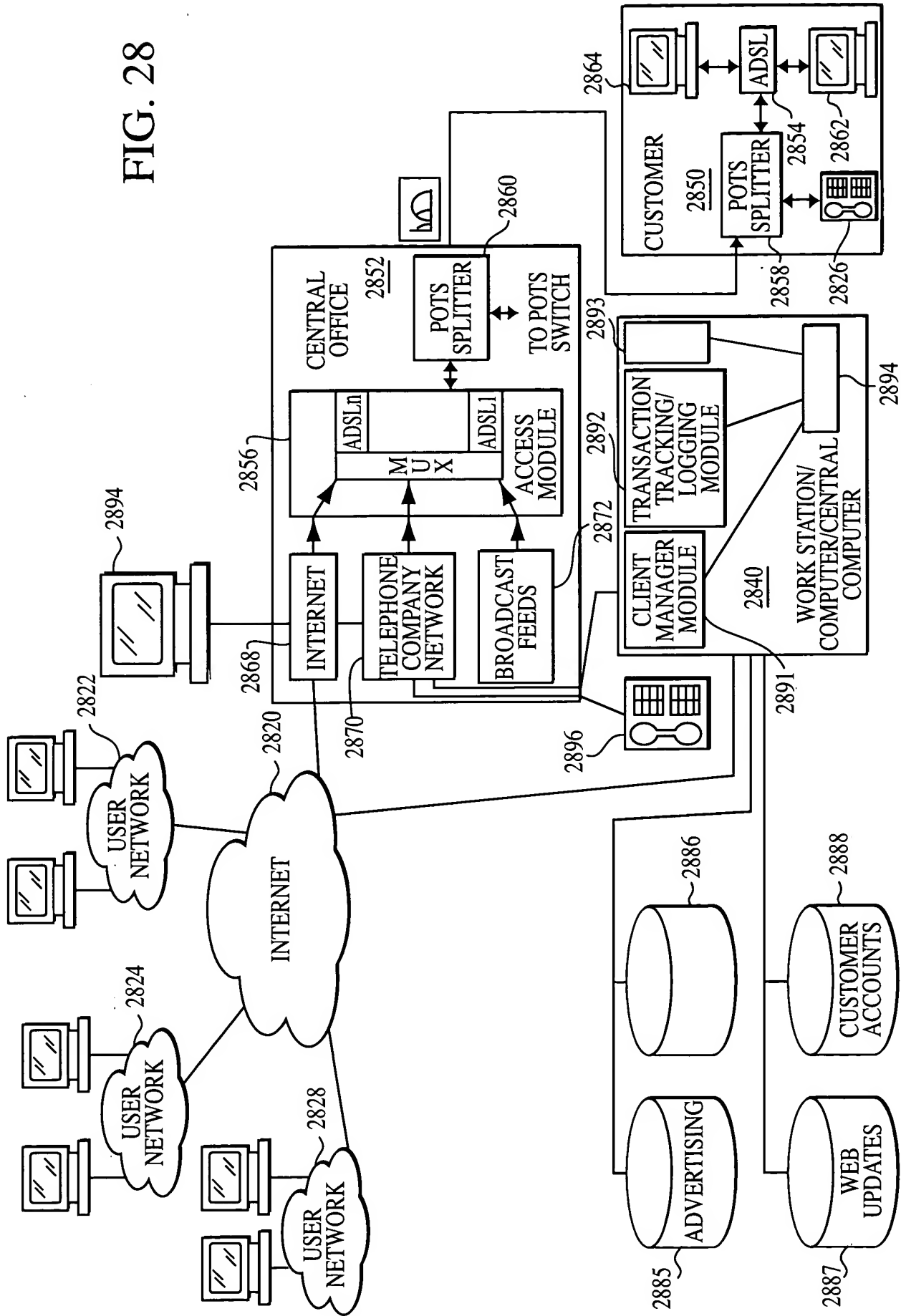


FIG. 27



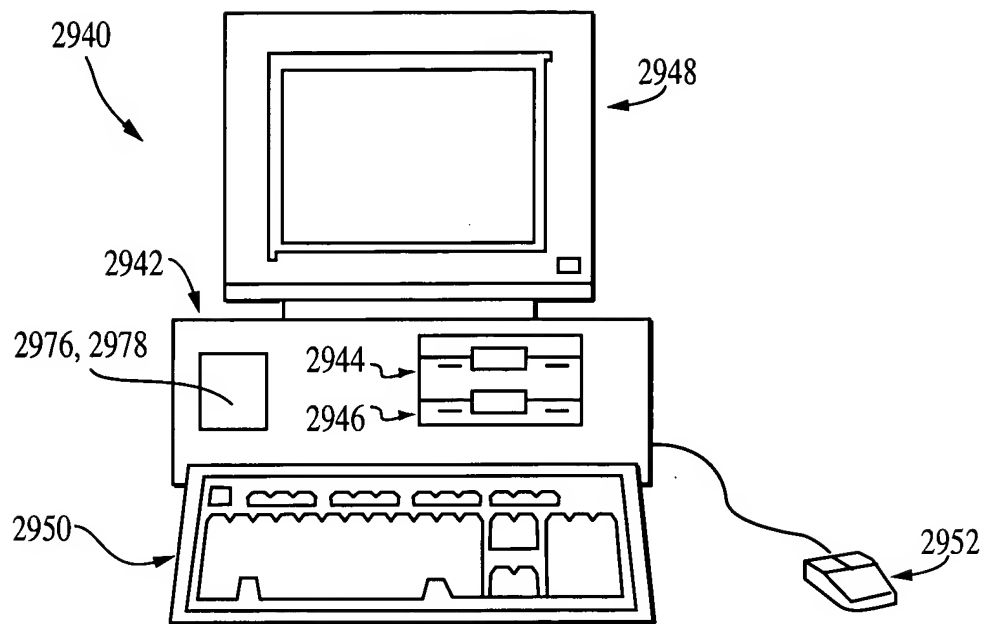


FIG. 29

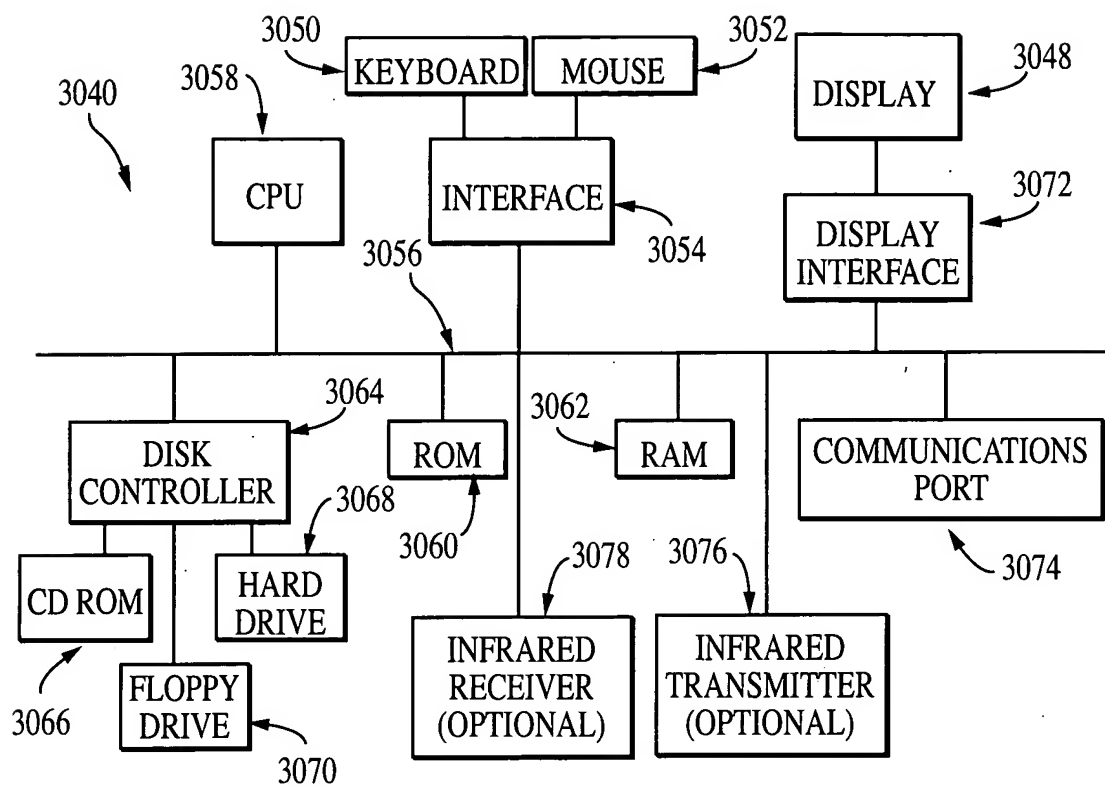


FIG. 30

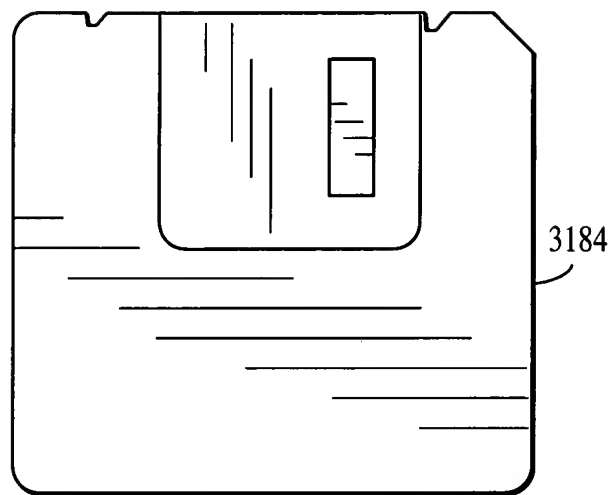


FIG. 31